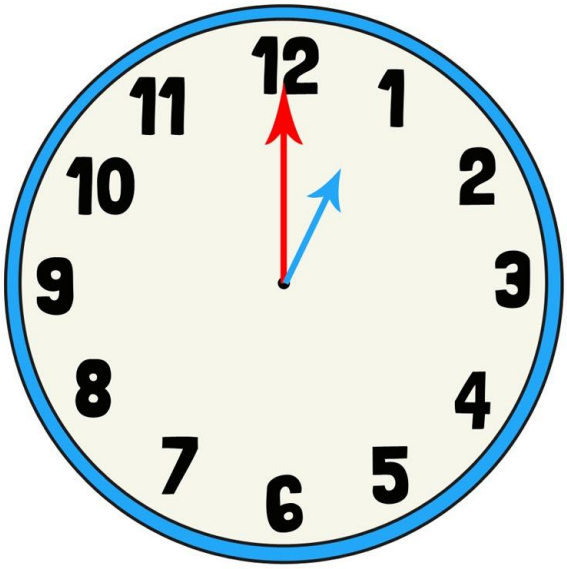
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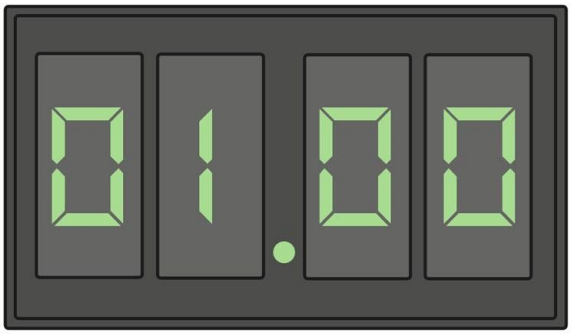
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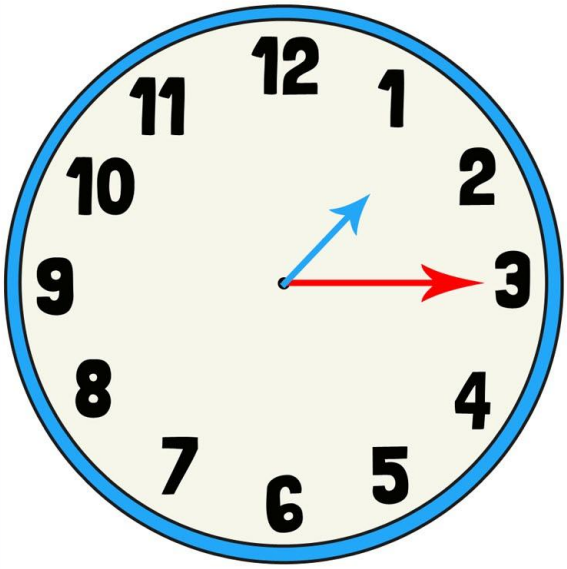
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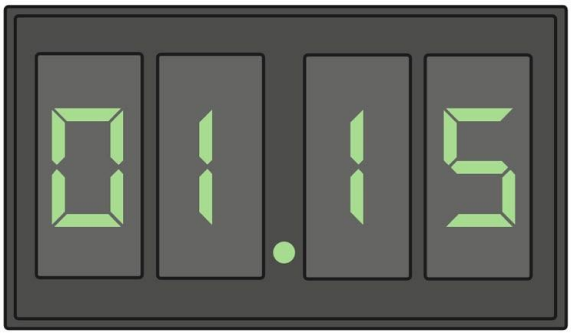
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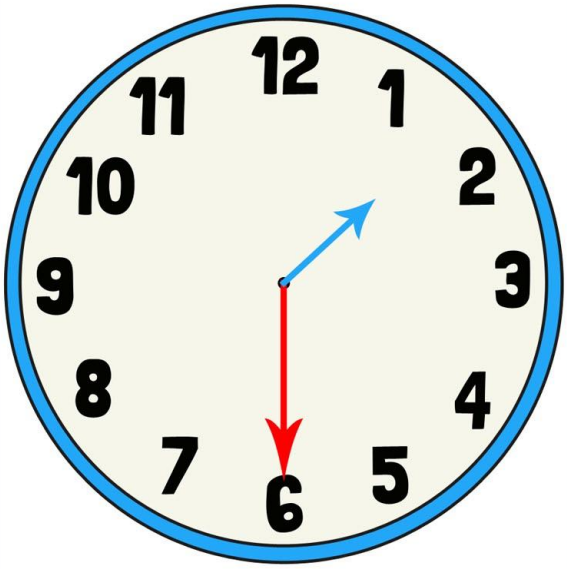
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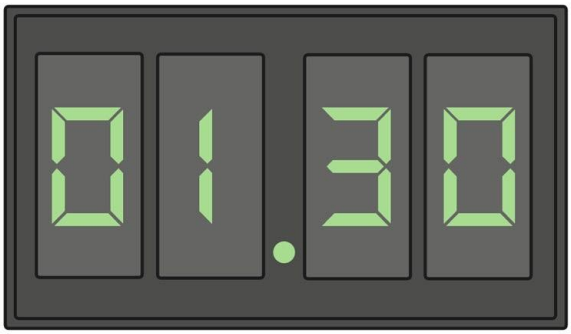
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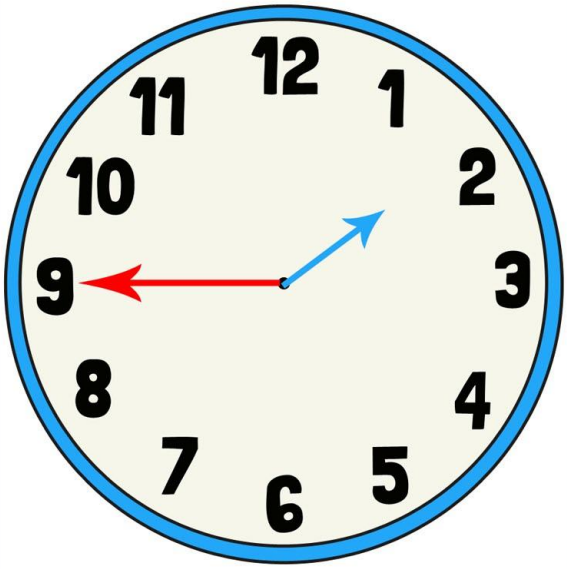
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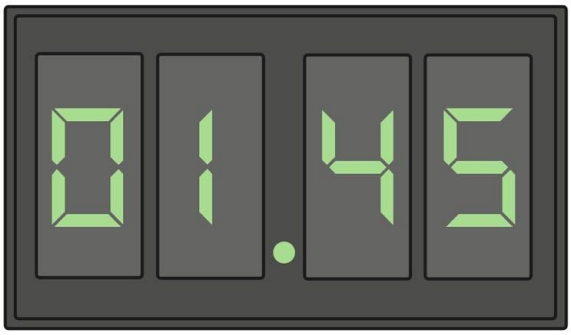
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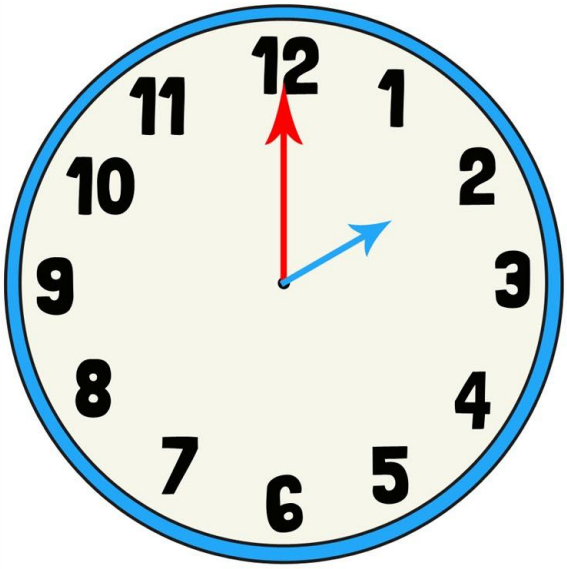
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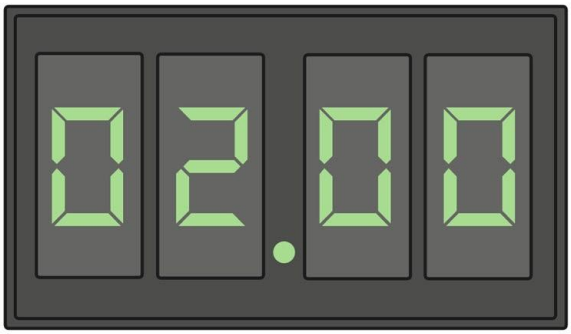
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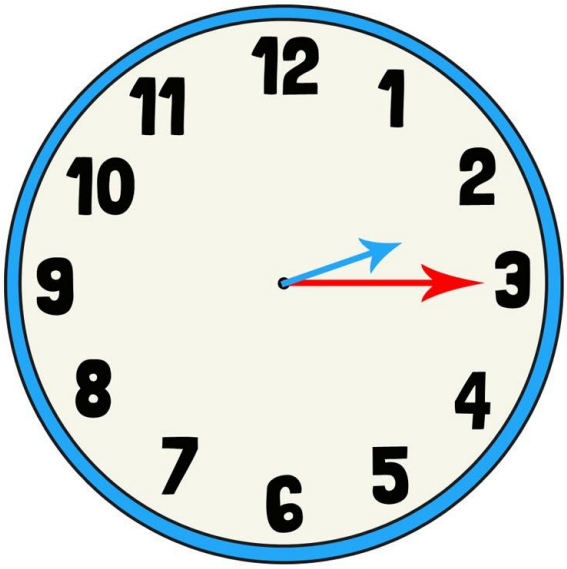
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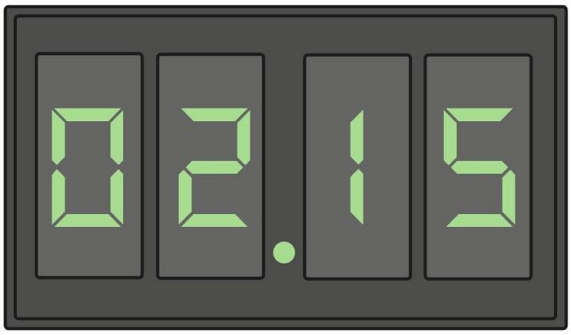
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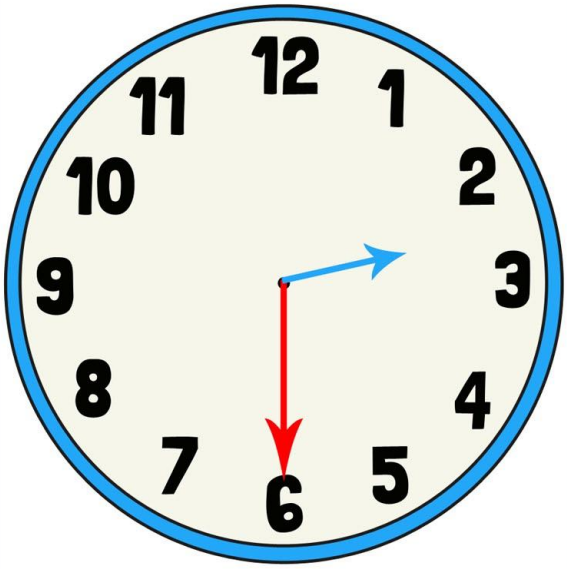
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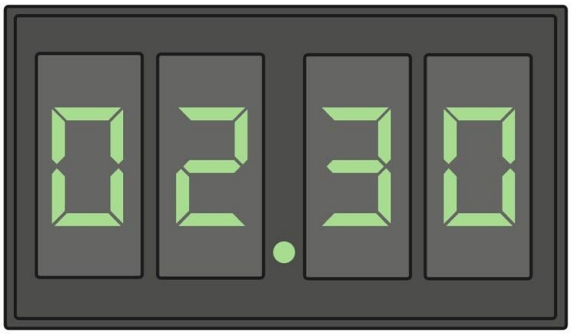
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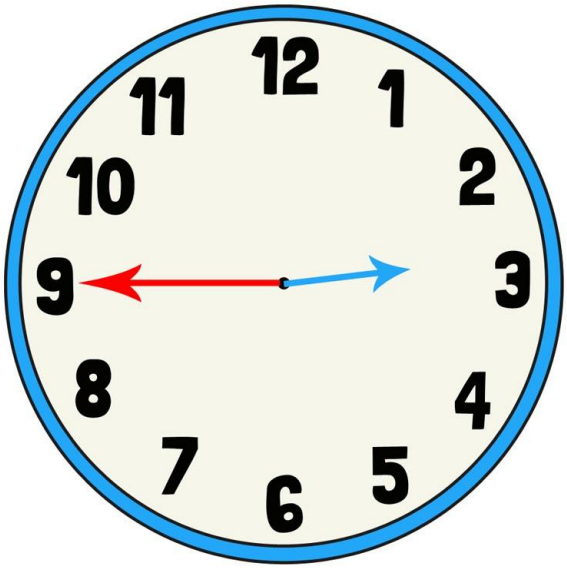
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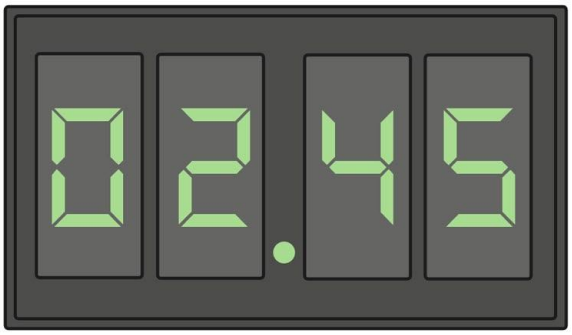
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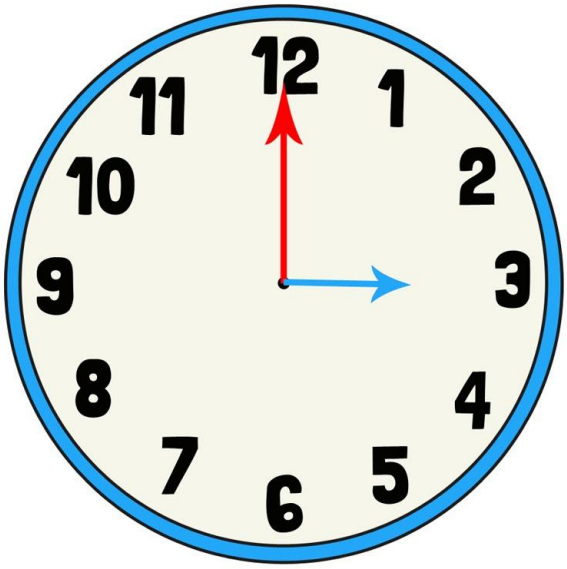
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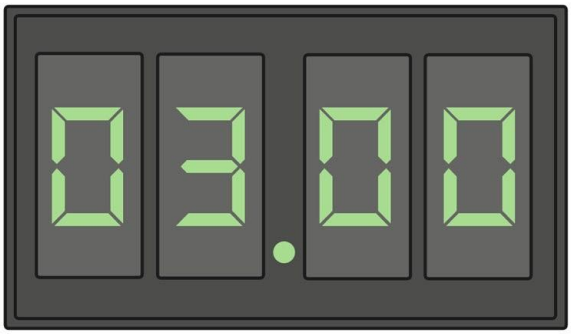
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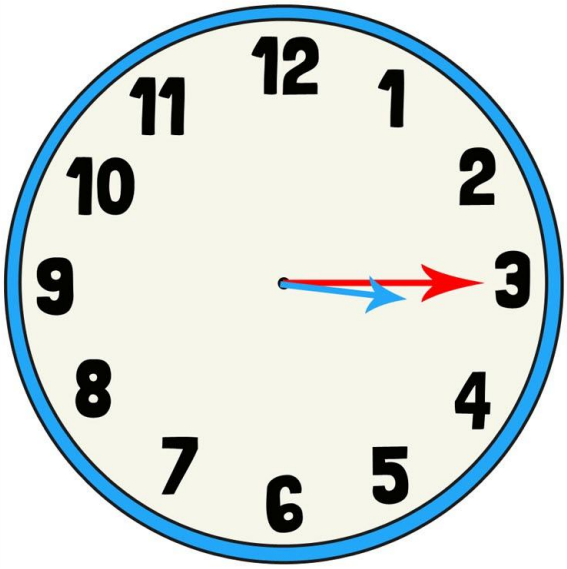
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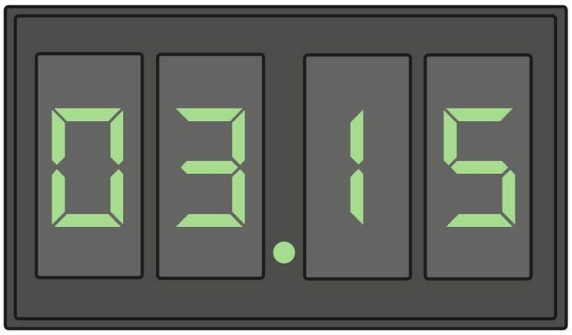
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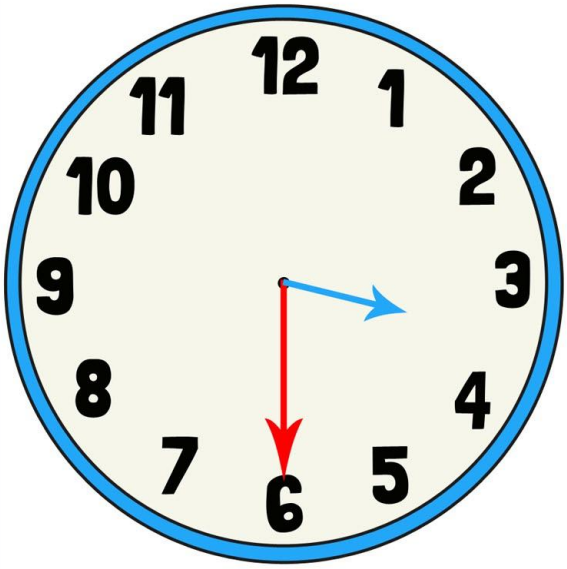
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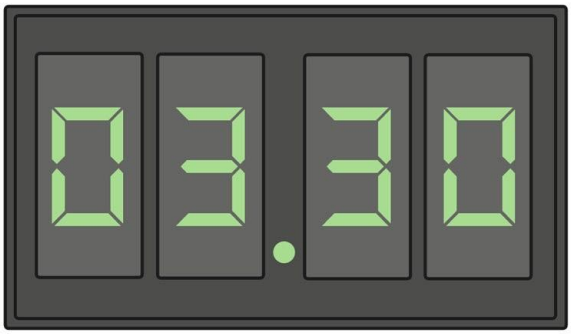
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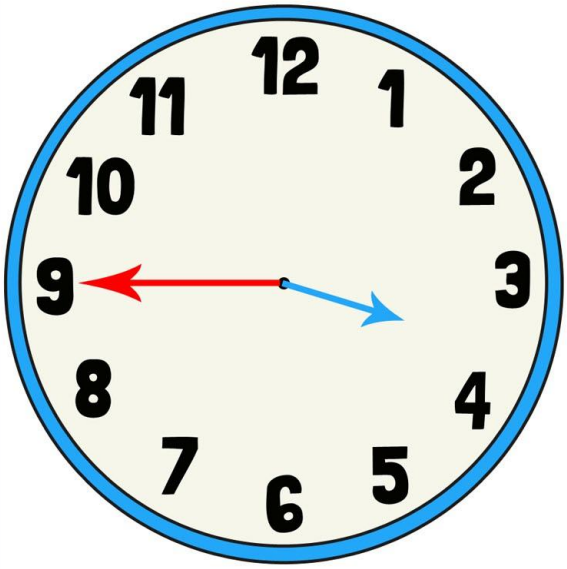
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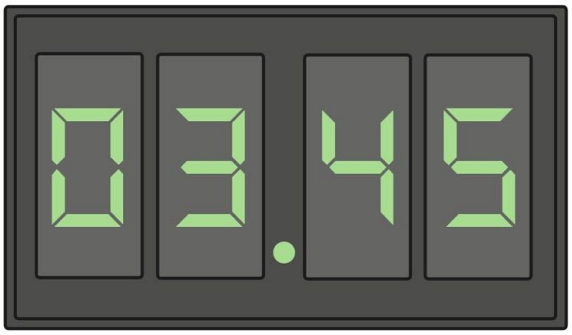
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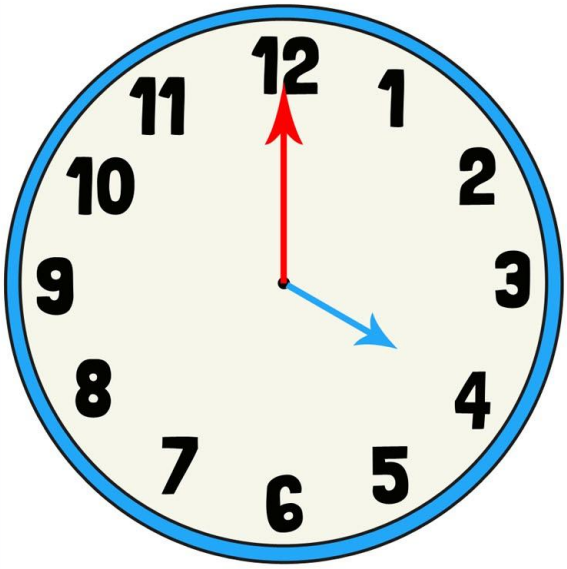
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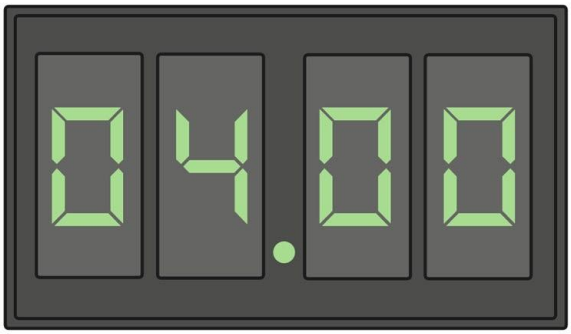
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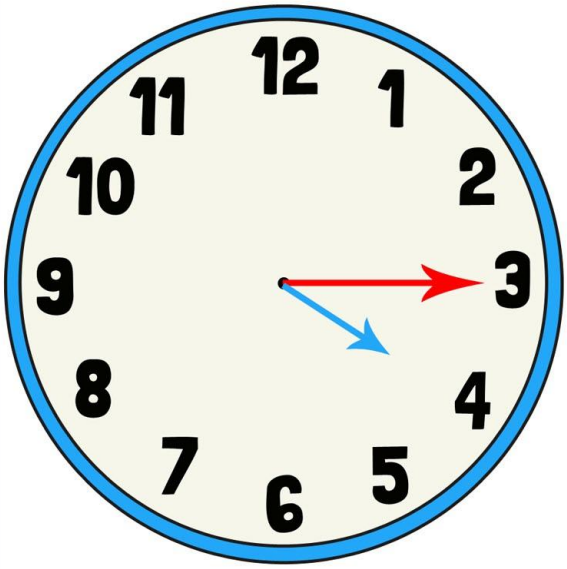
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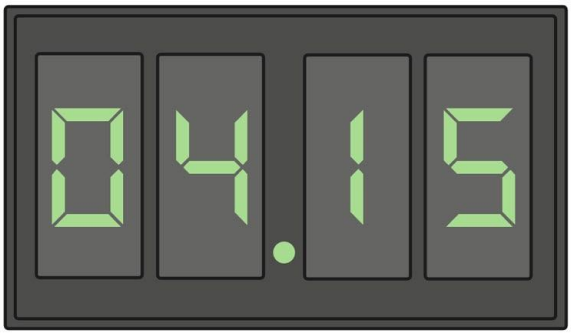
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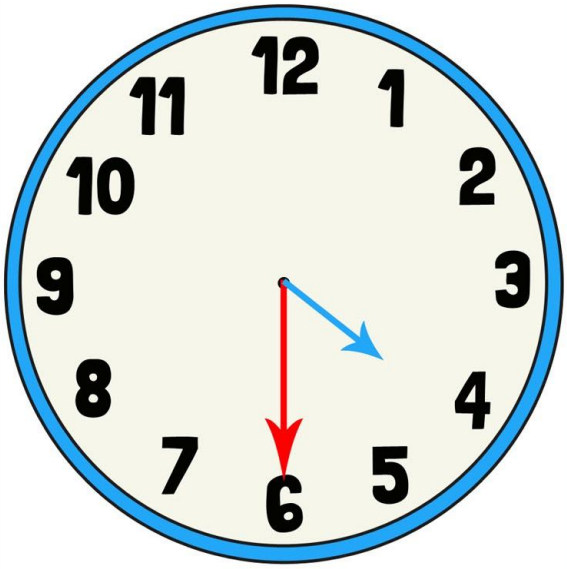
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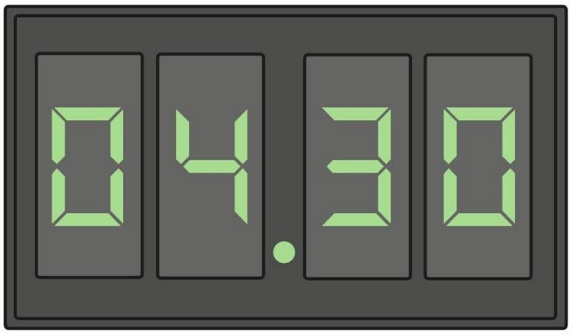
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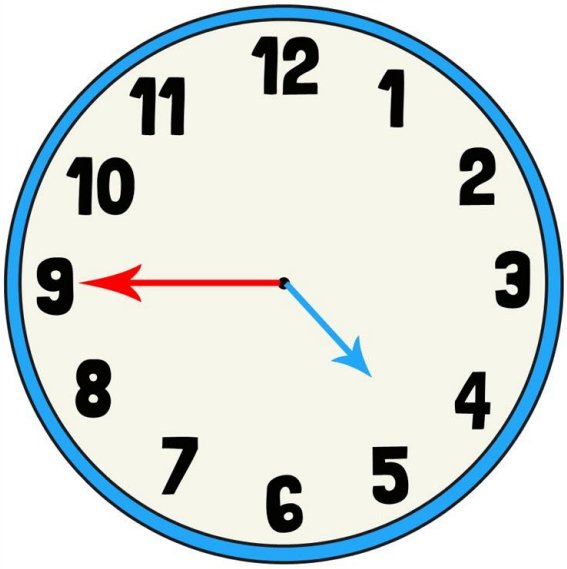
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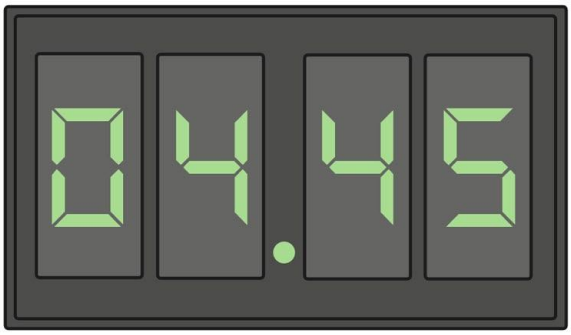
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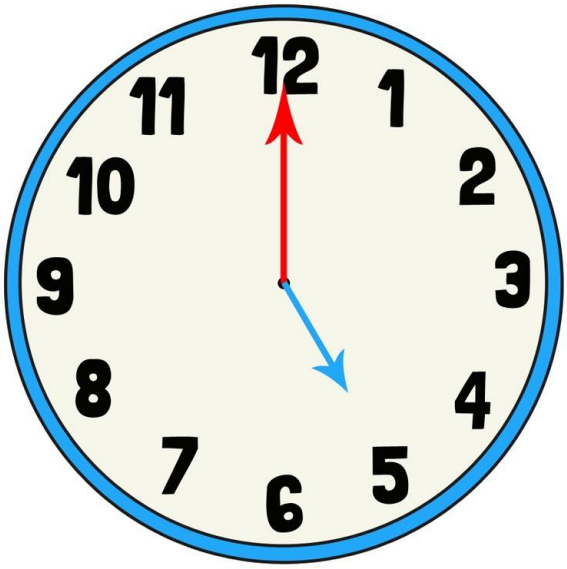
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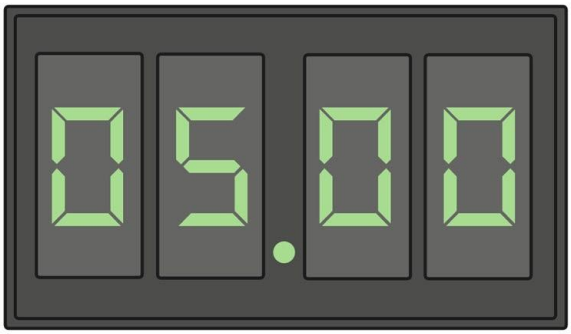
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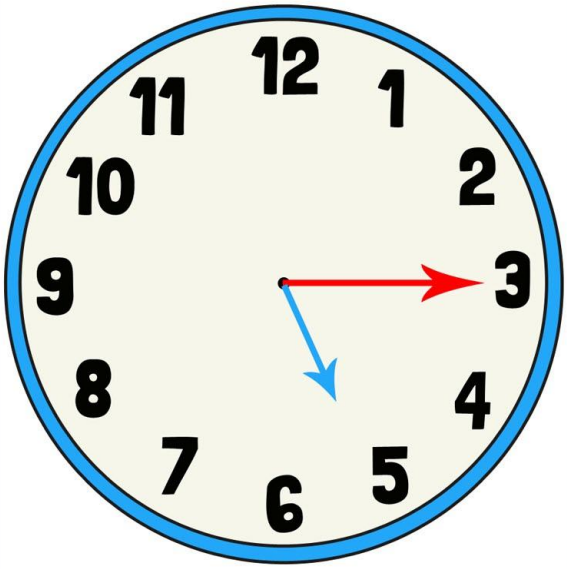
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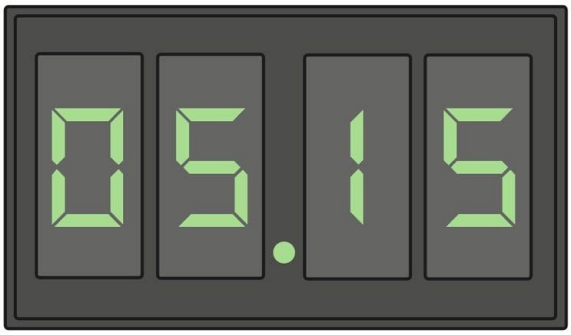
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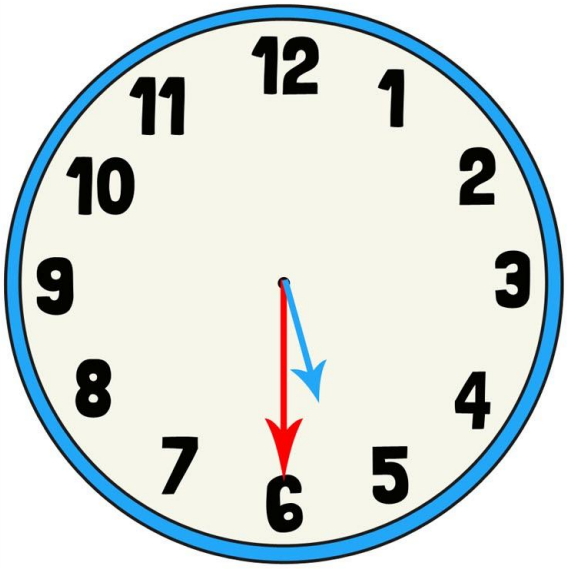
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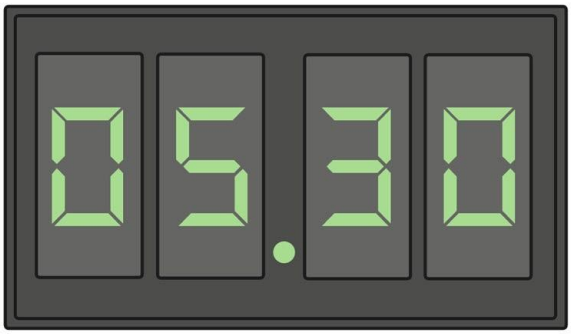
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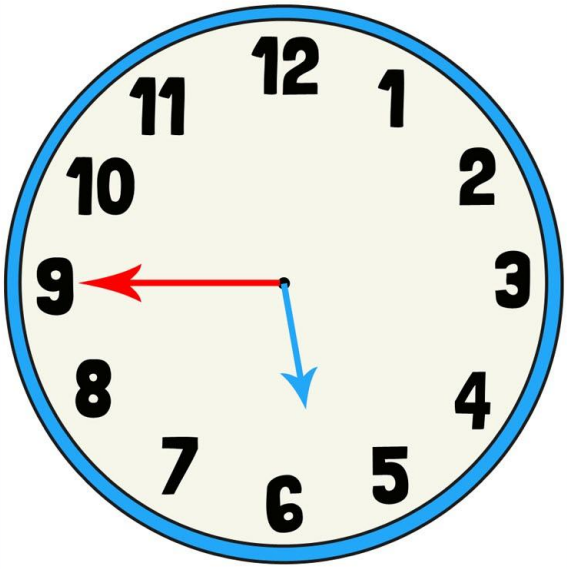
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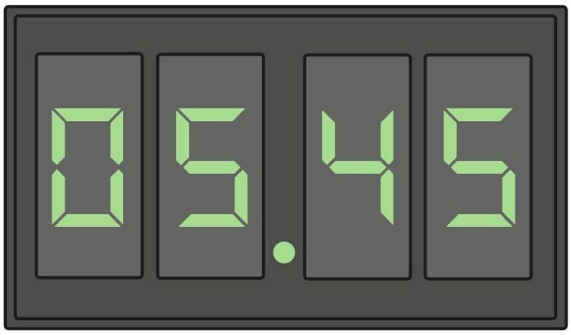
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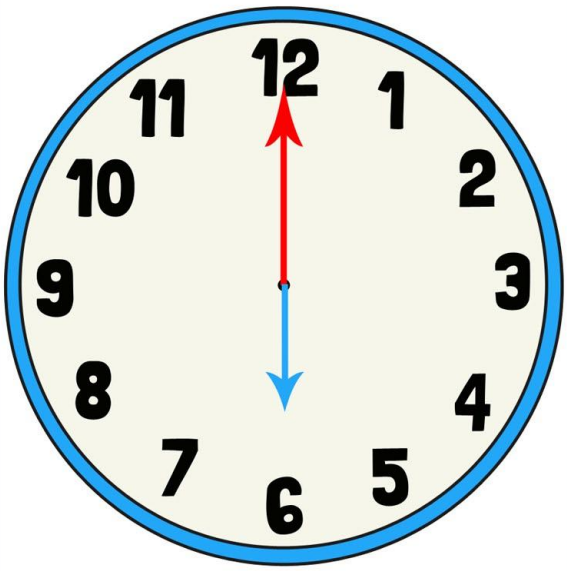
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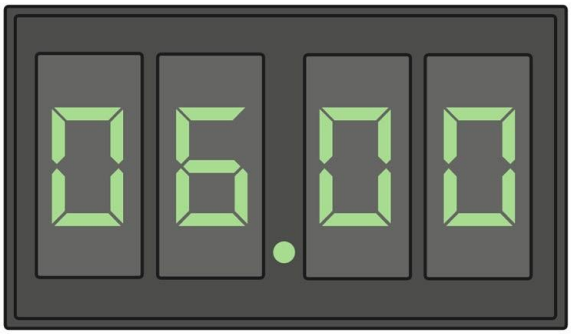
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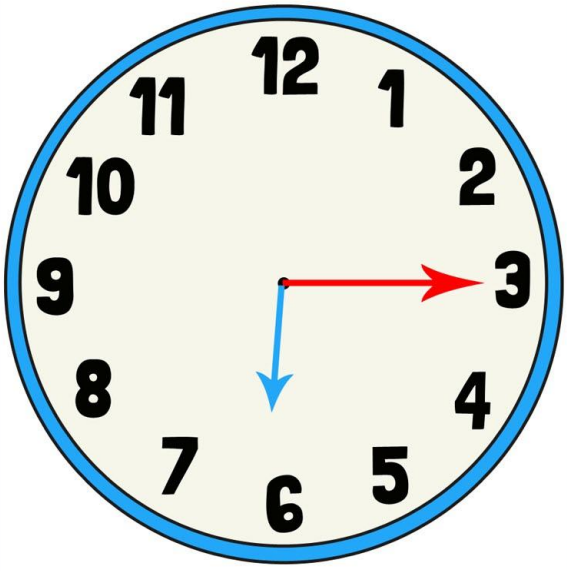
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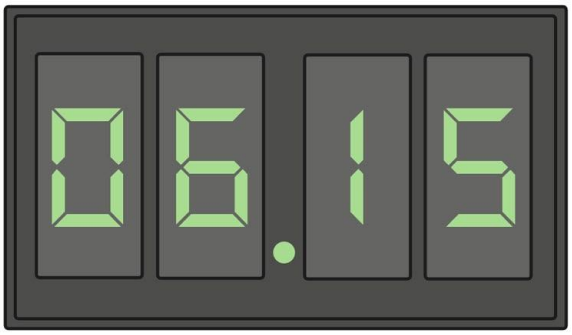
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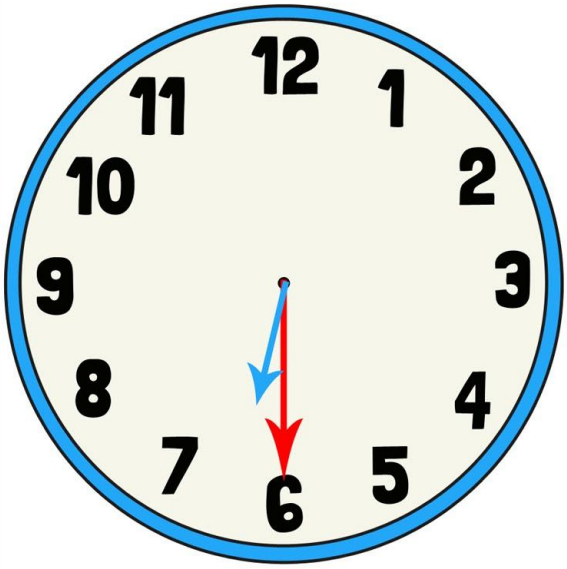
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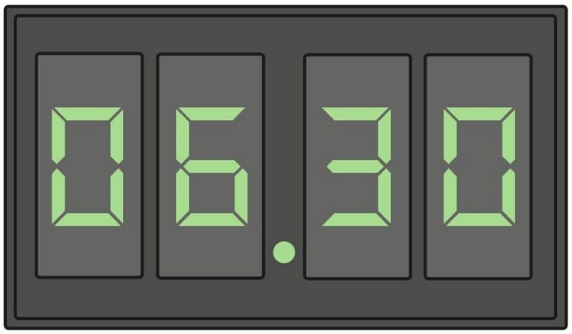
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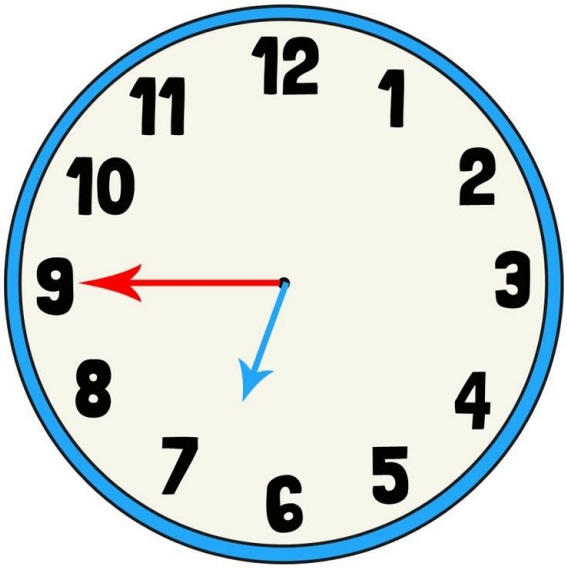
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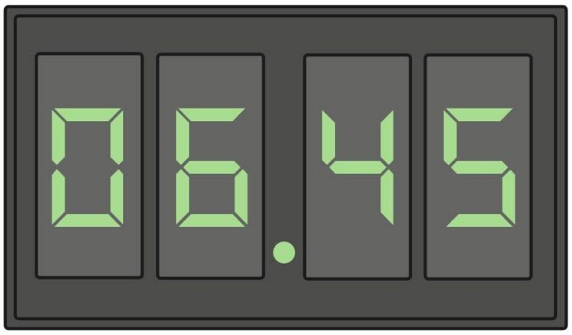
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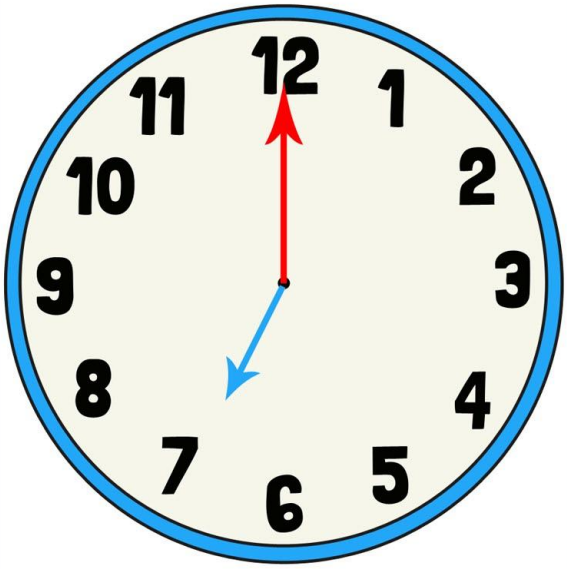
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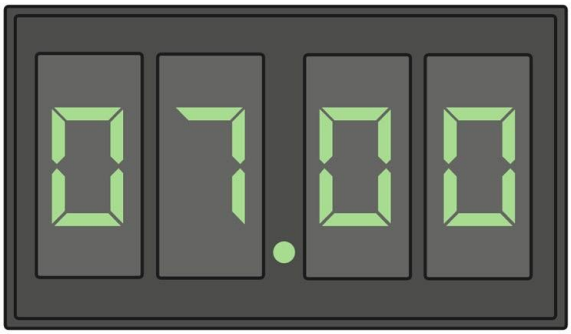
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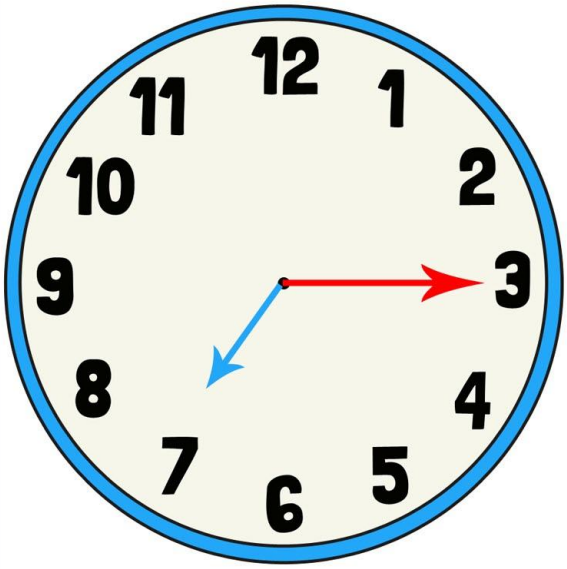
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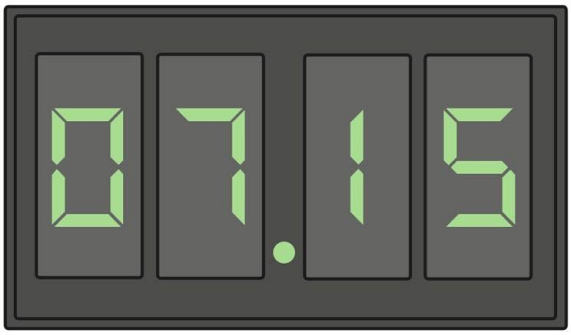
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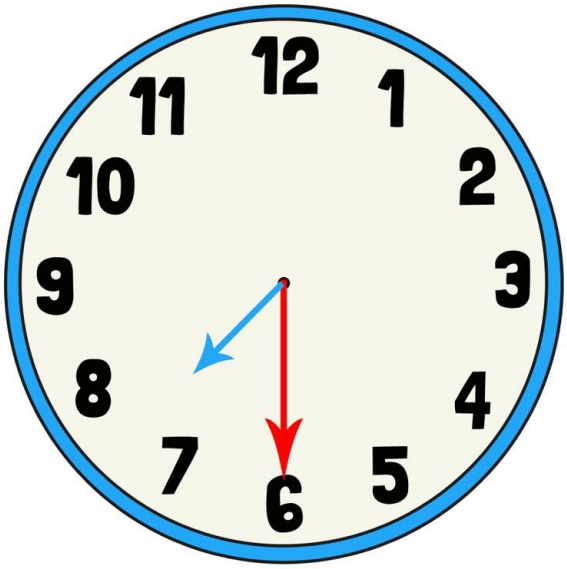
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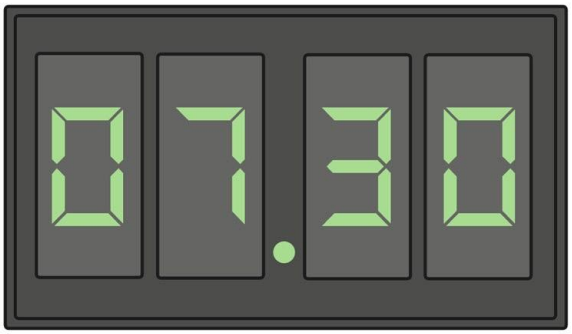
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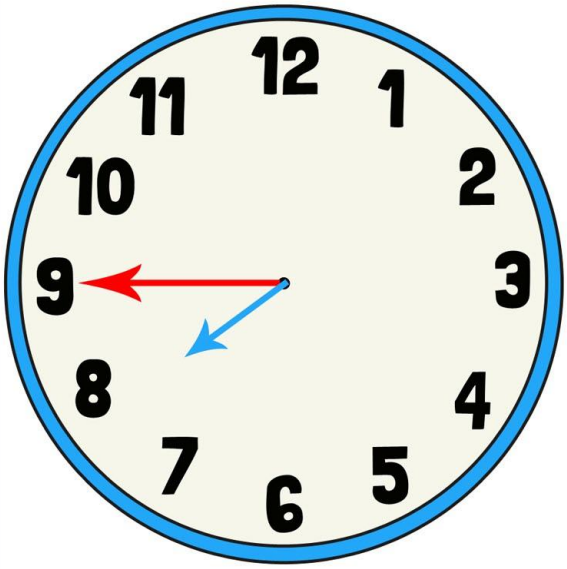
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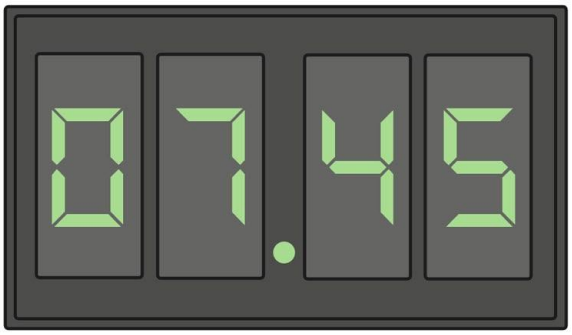
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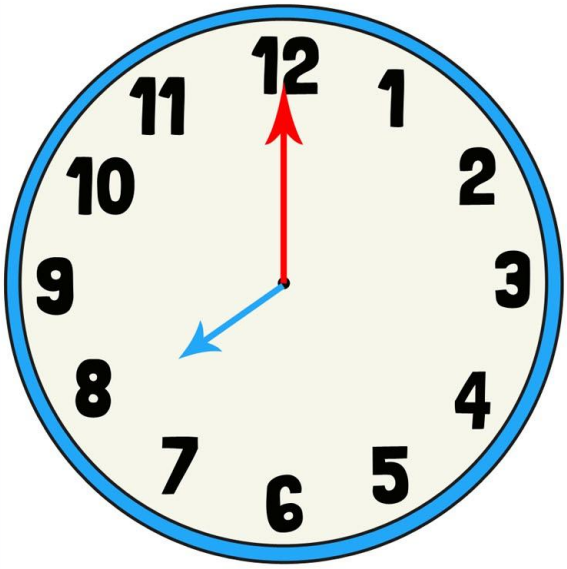
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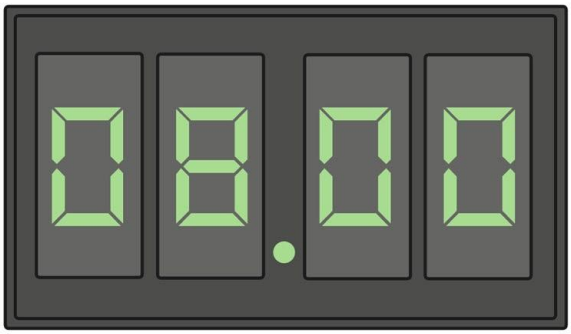
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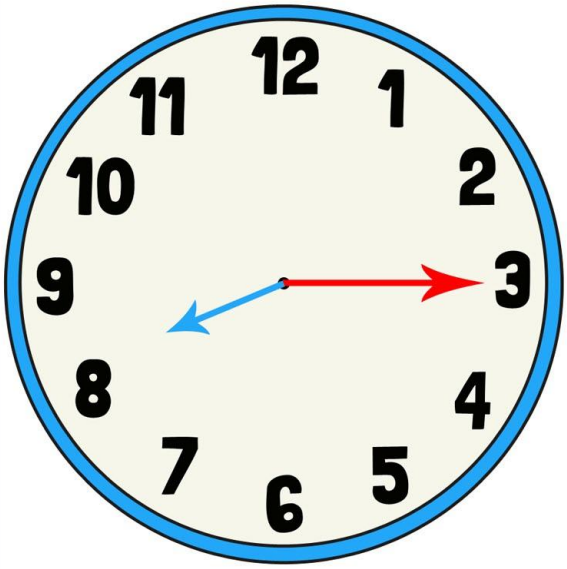
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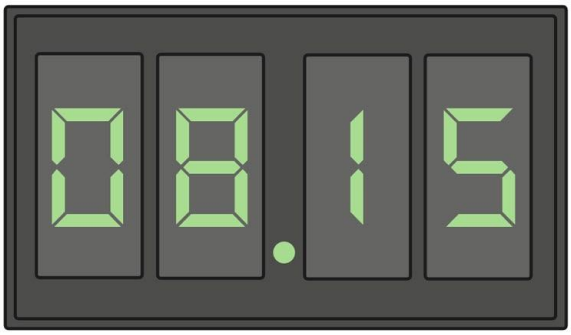
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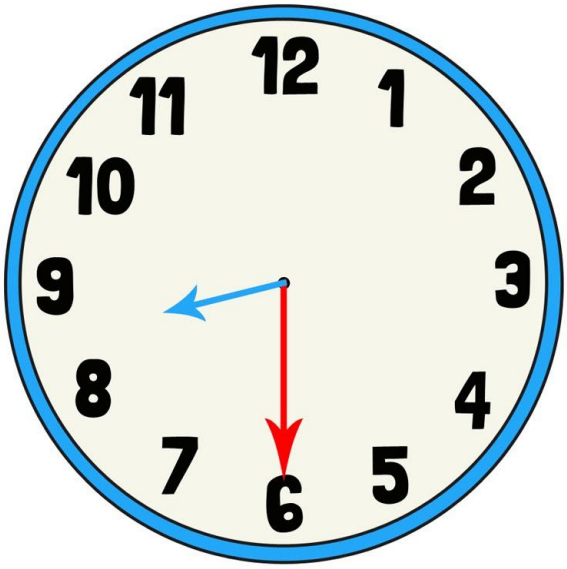
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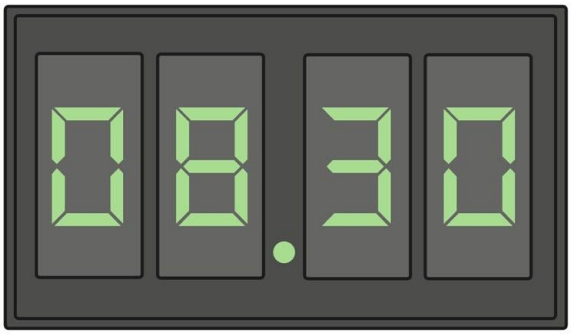
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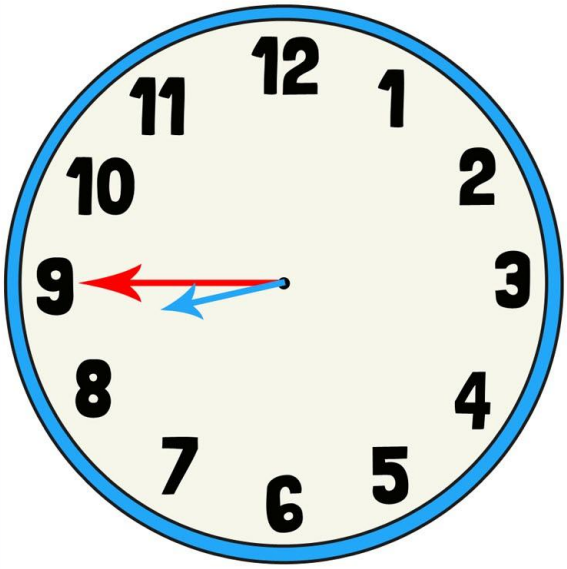
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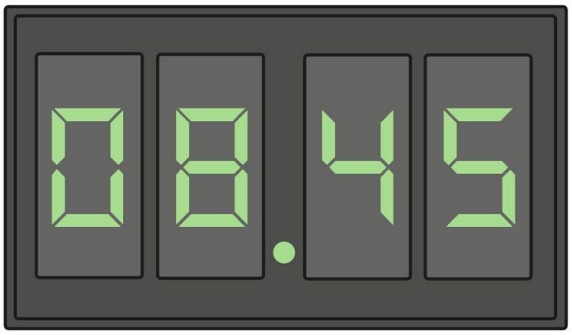
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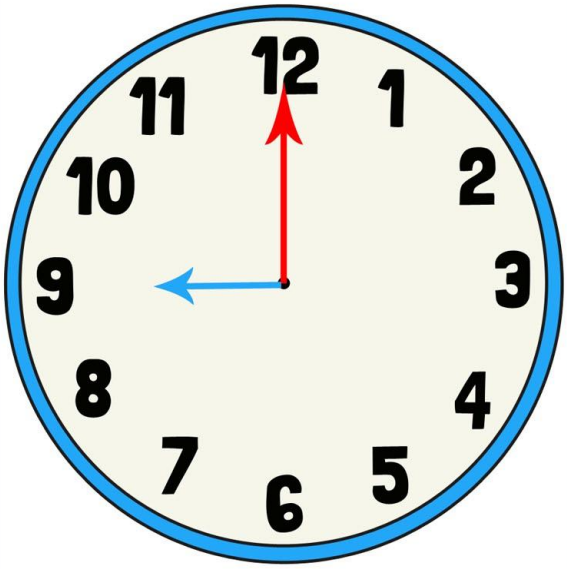
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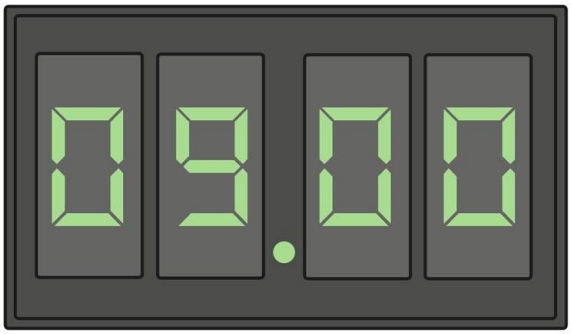
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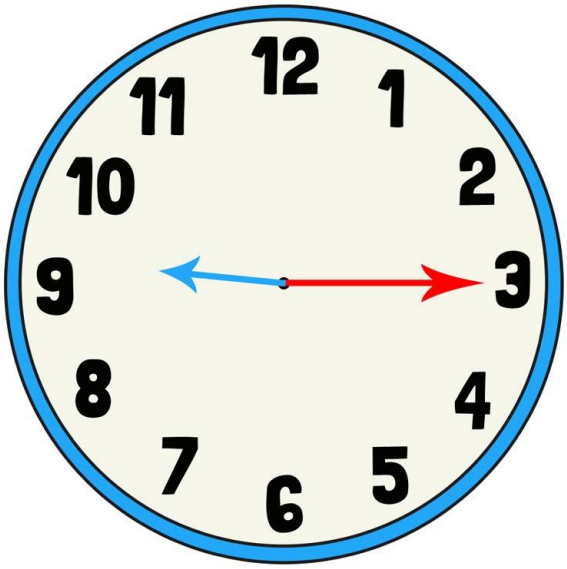
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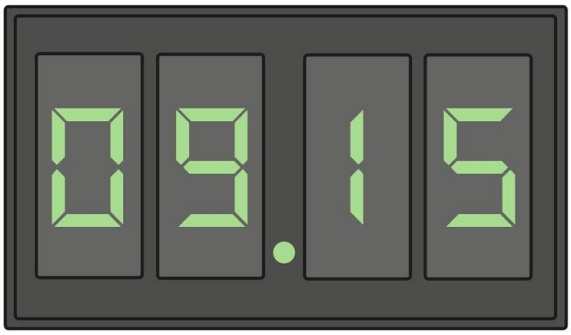
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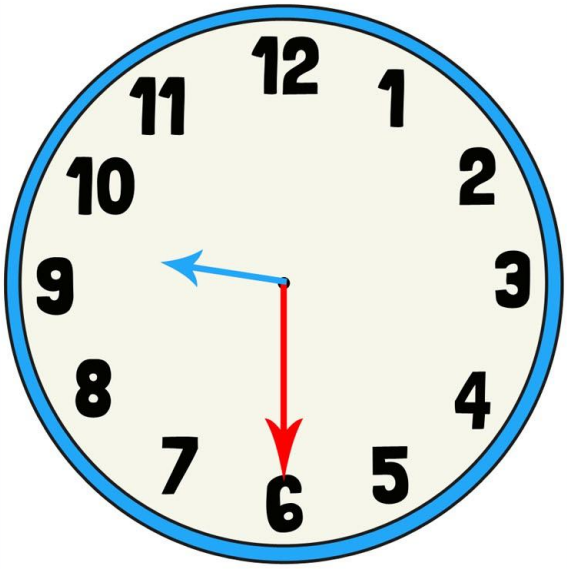
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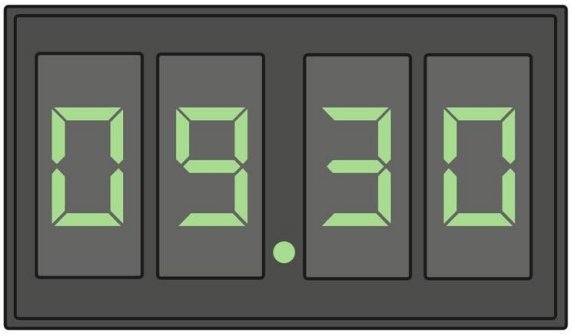
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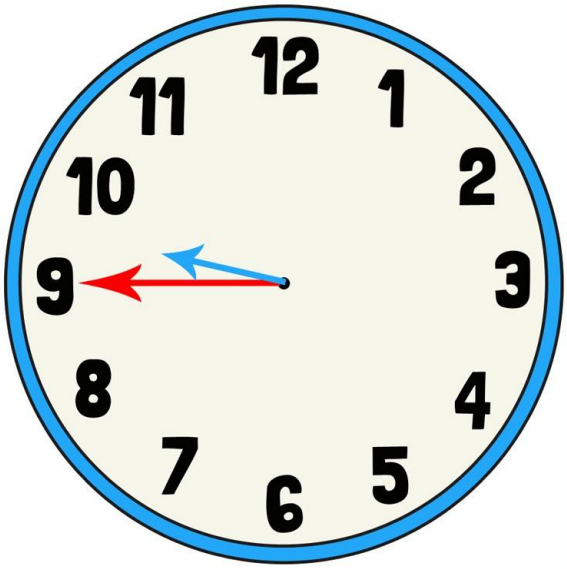
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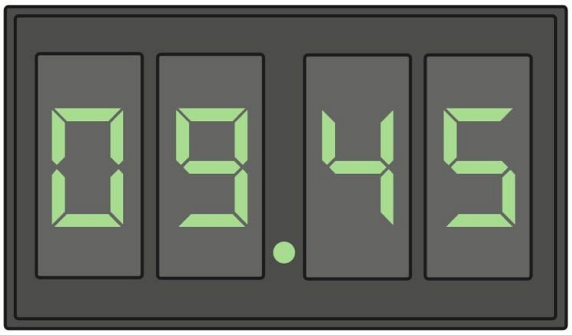
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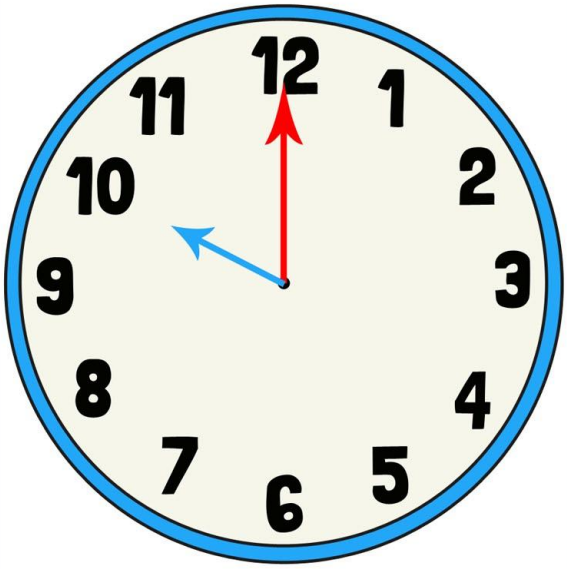
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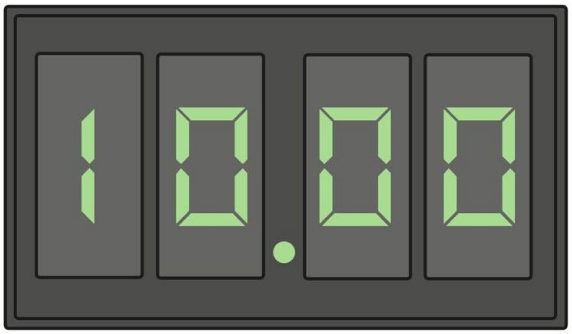
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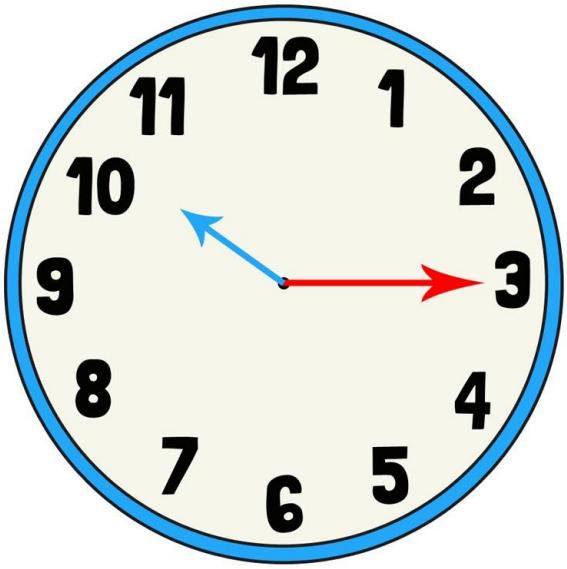
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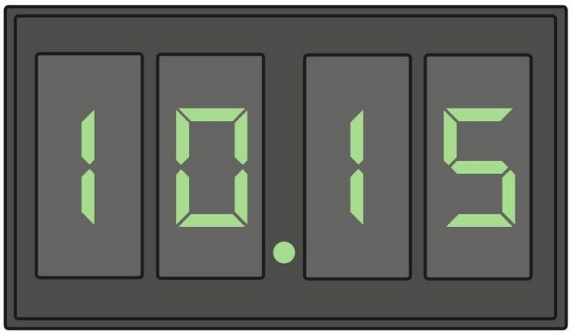
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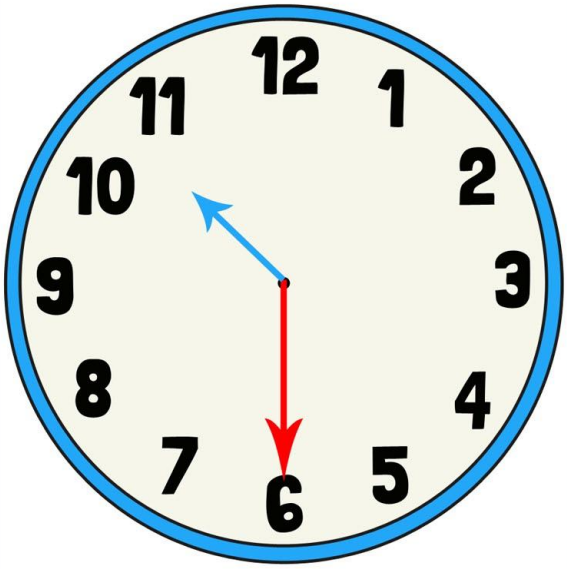
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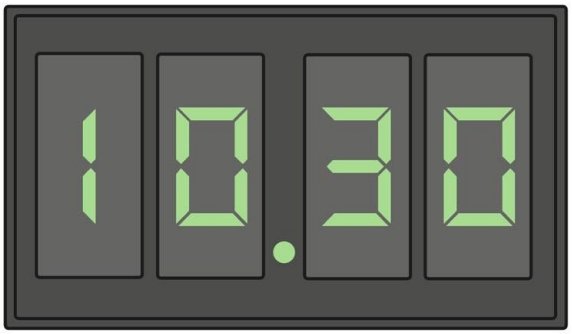
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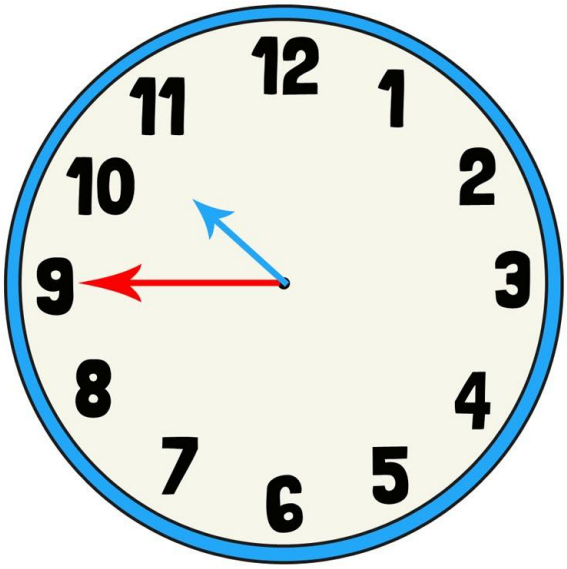
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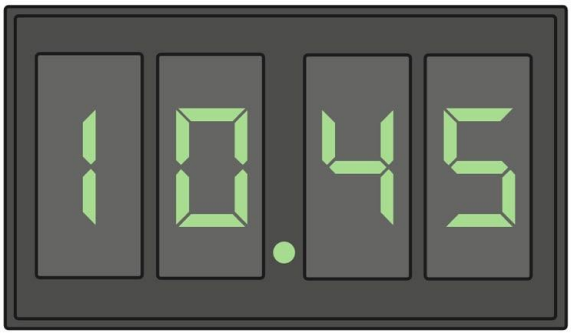
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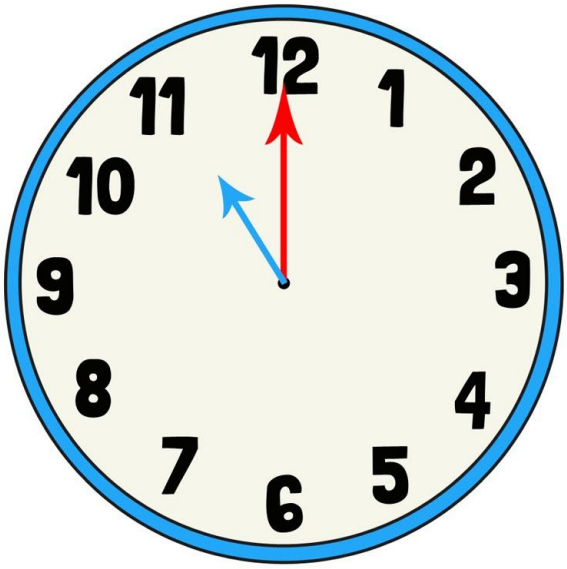
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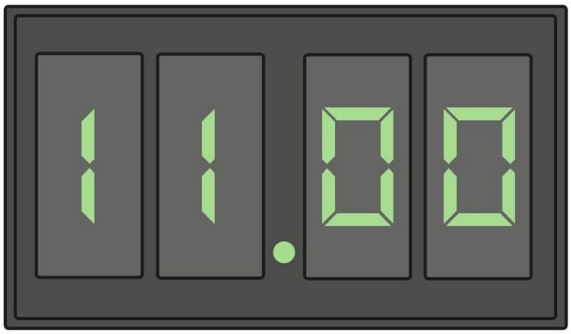
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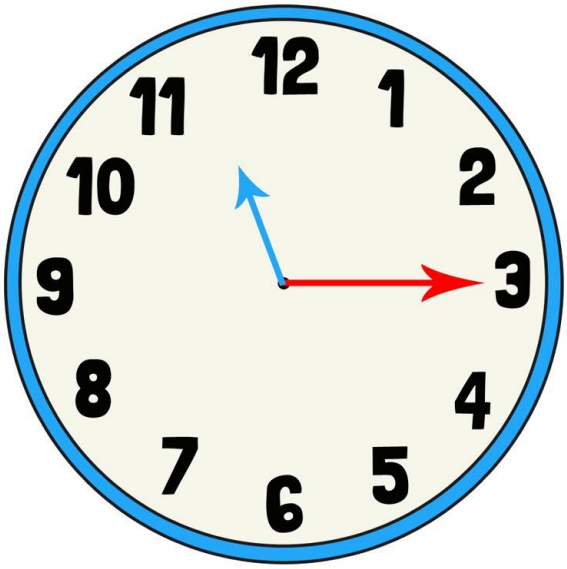
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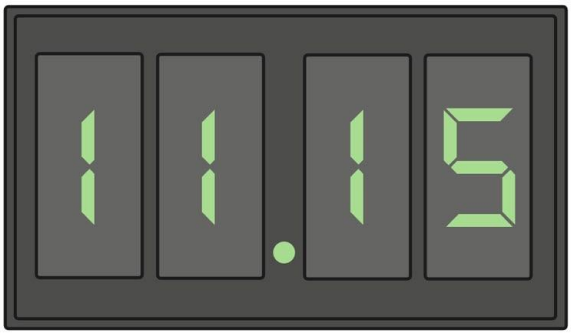
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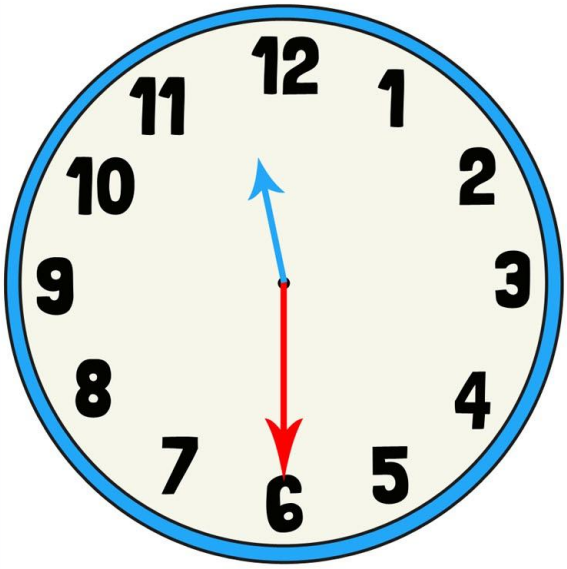
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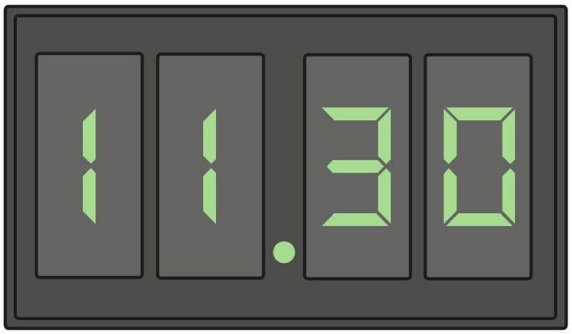
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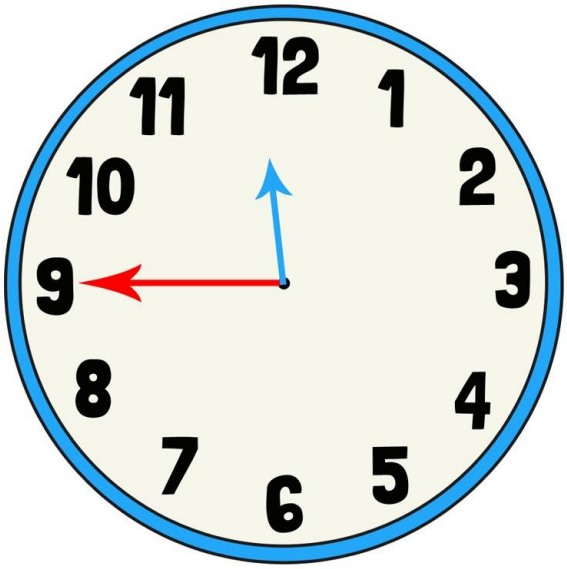
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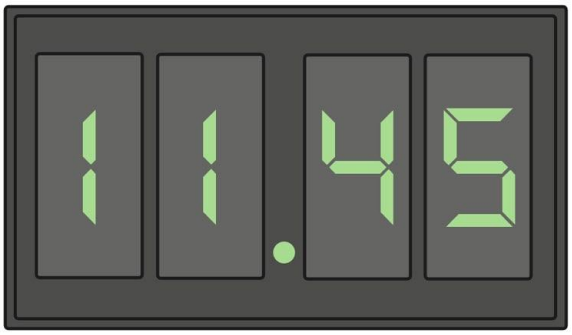
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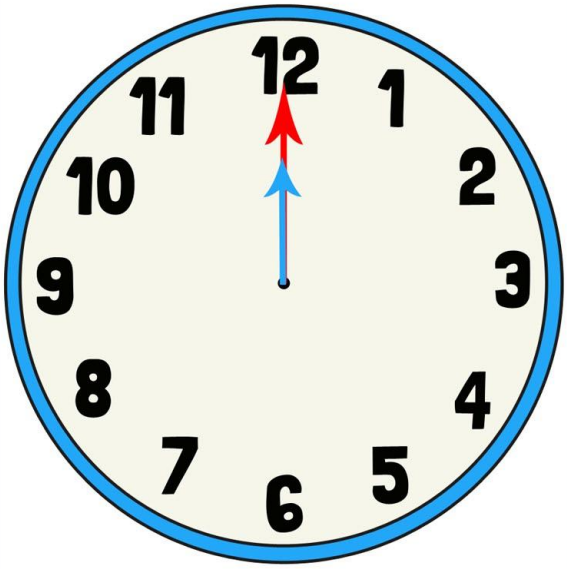
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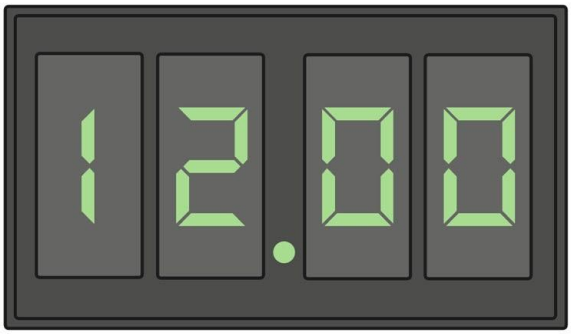
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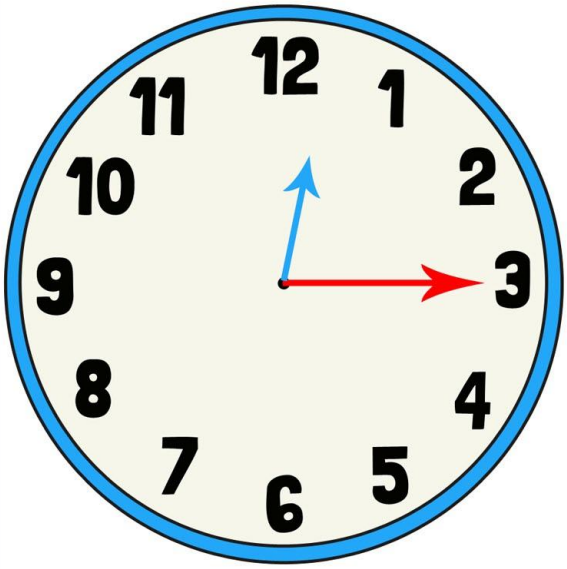
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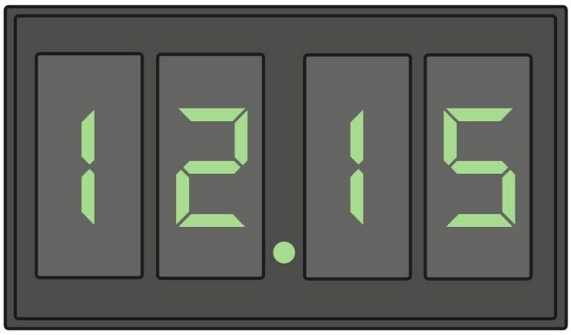
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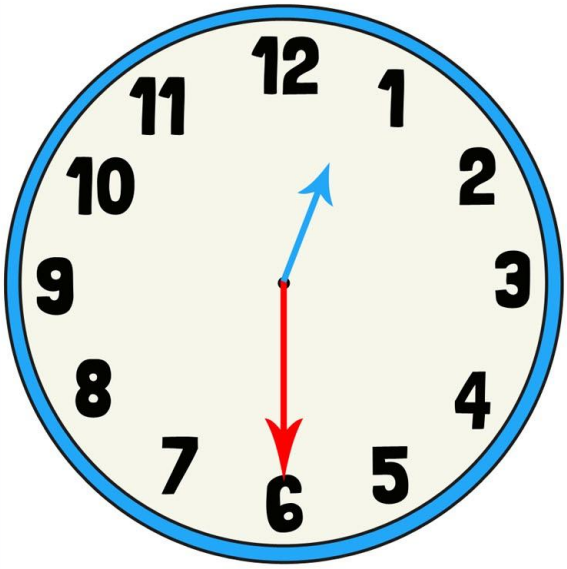
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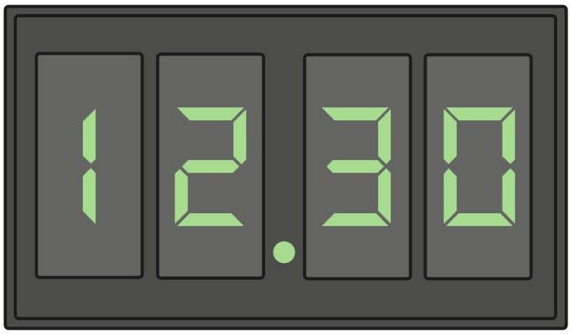
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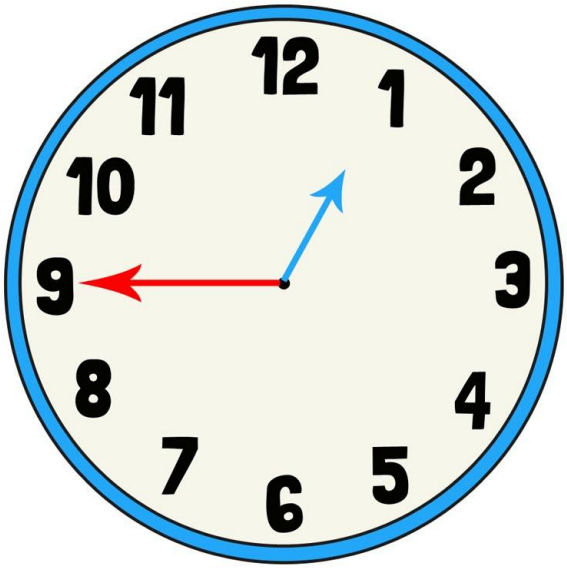
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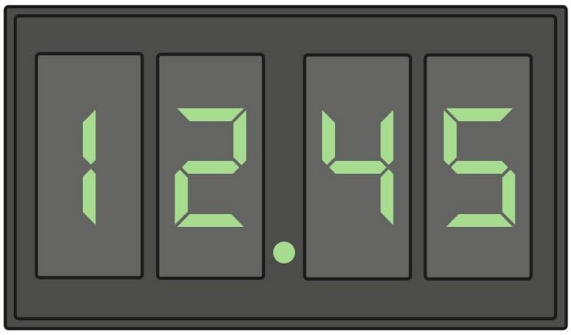
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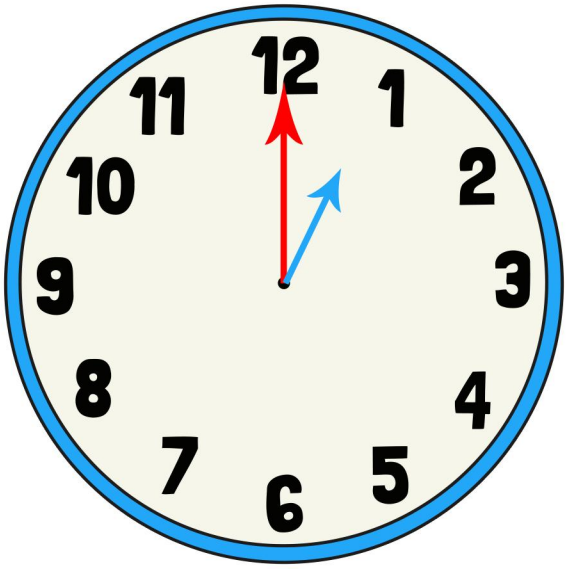
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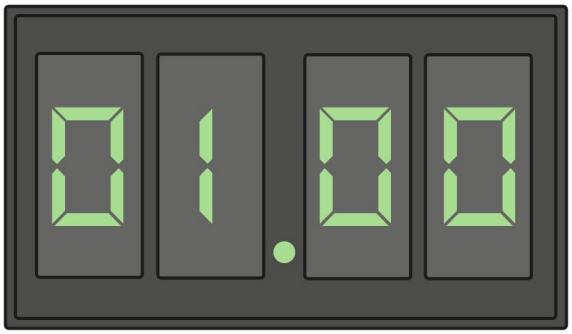
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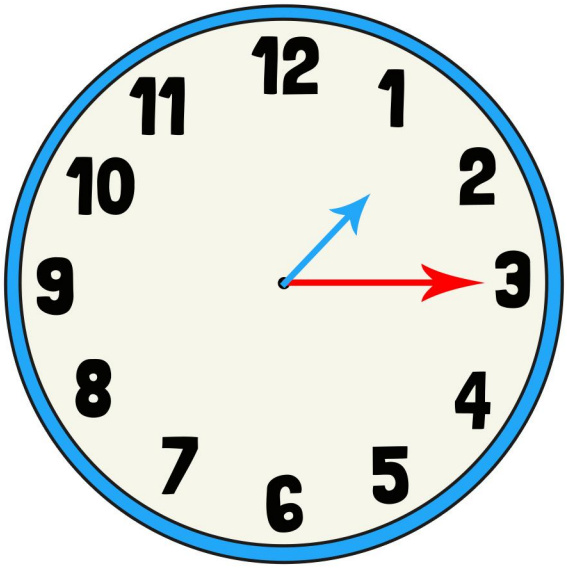
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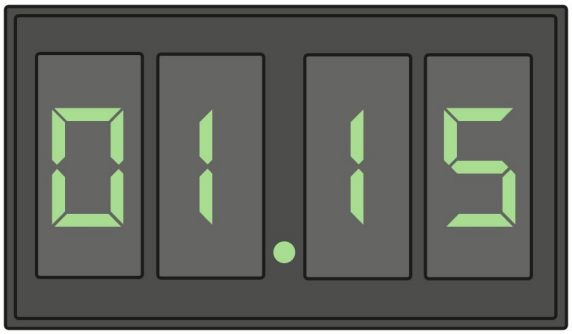
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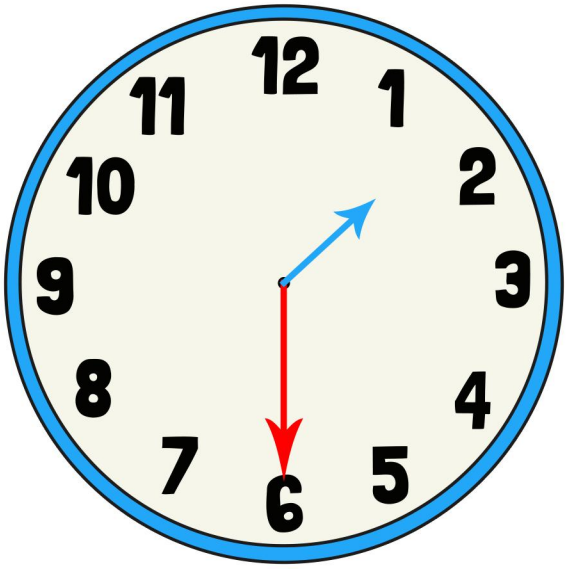
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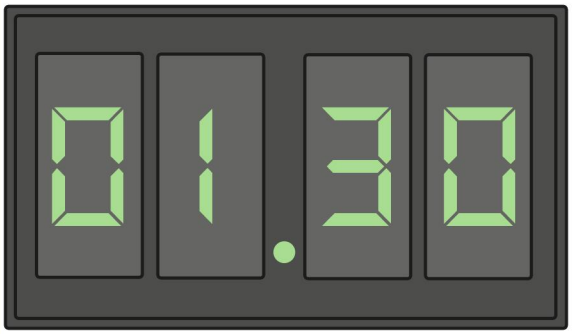
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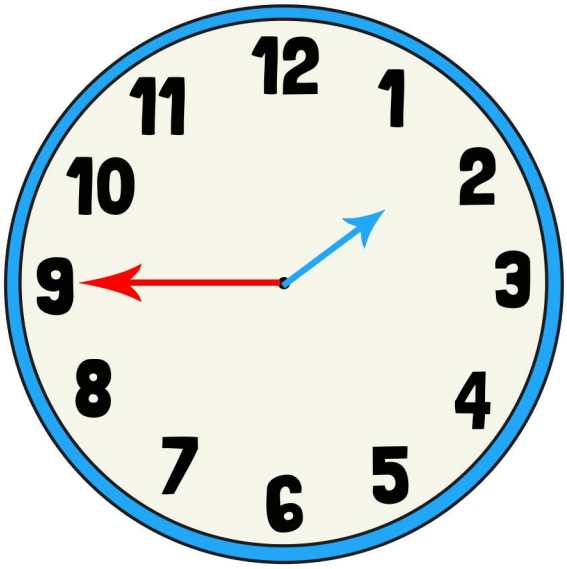
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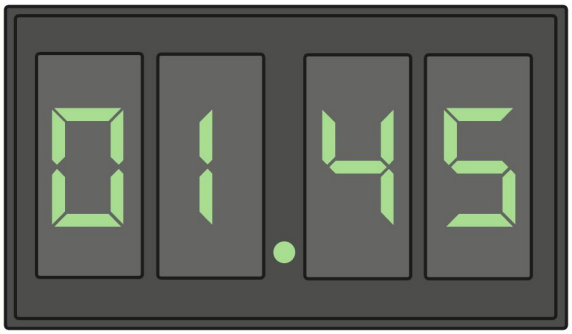
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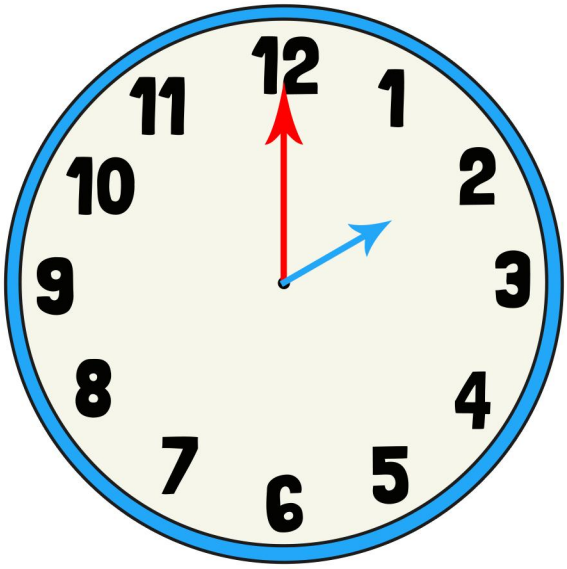
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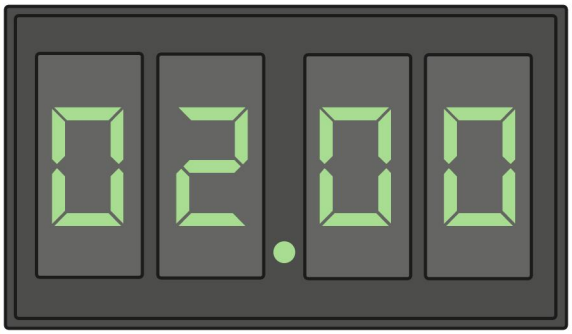
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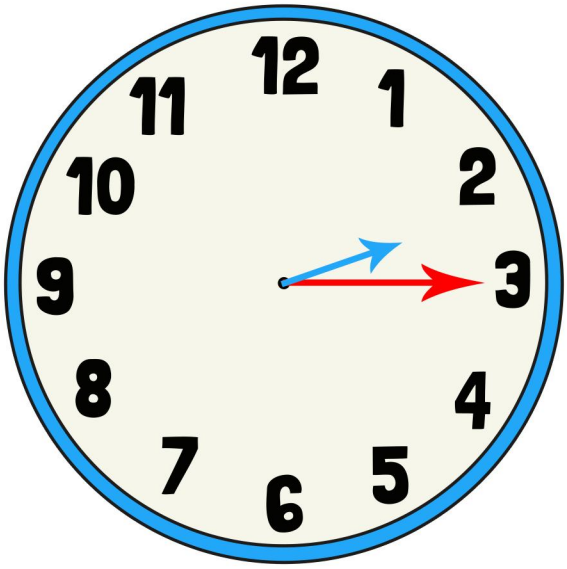
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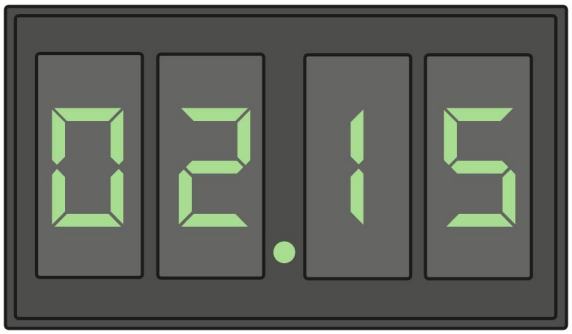
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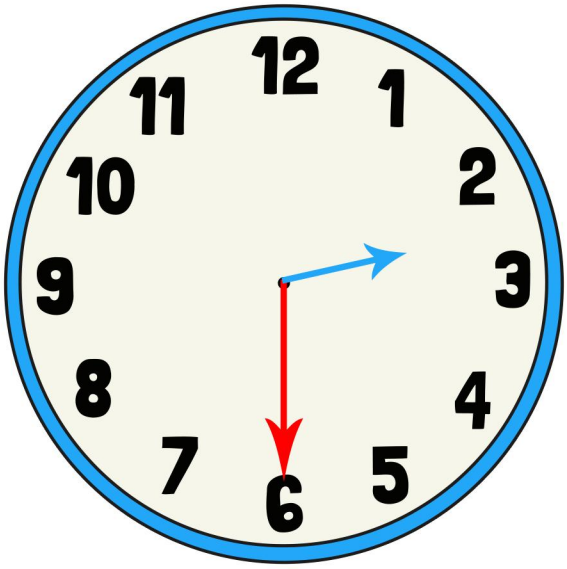
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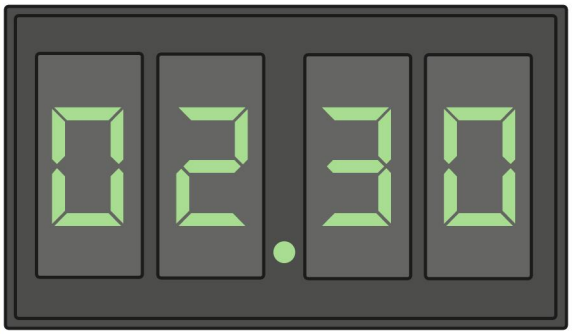
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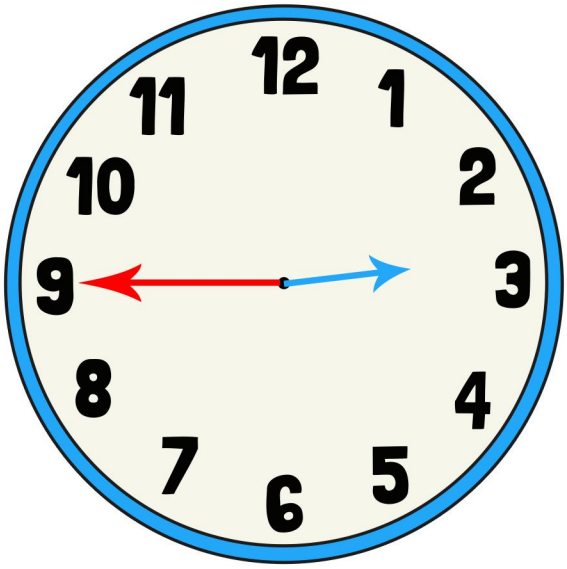
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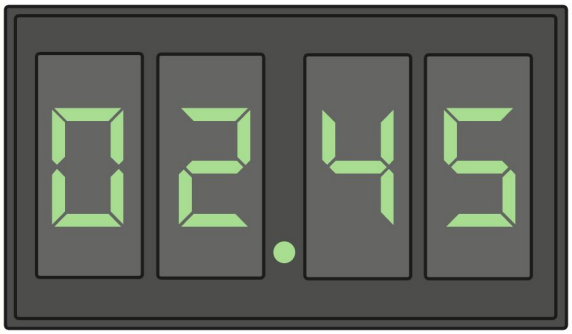
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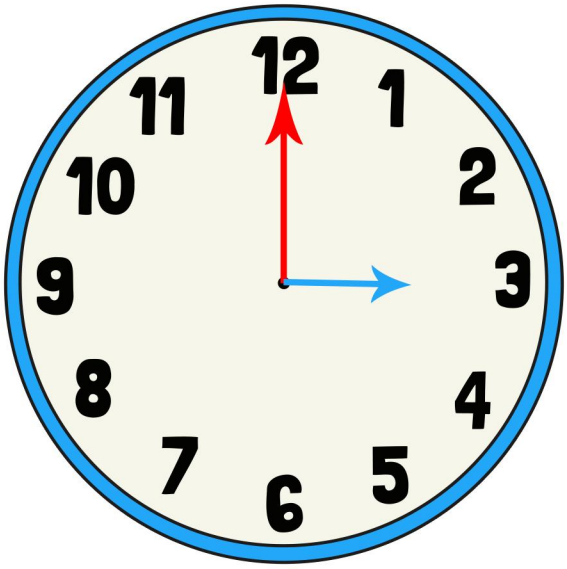
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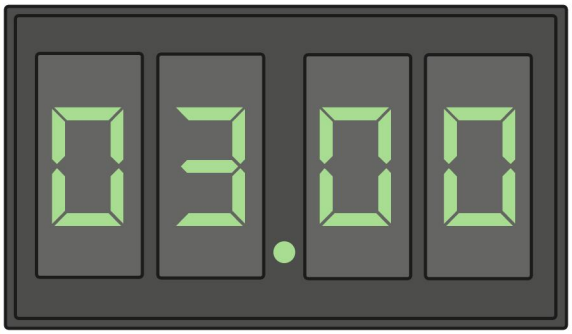
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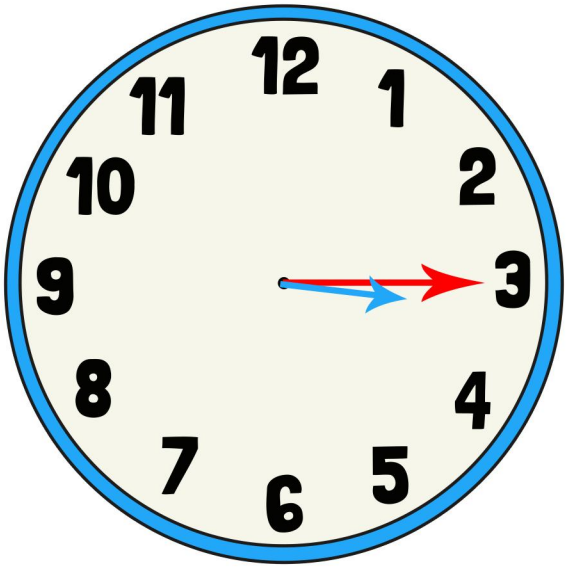
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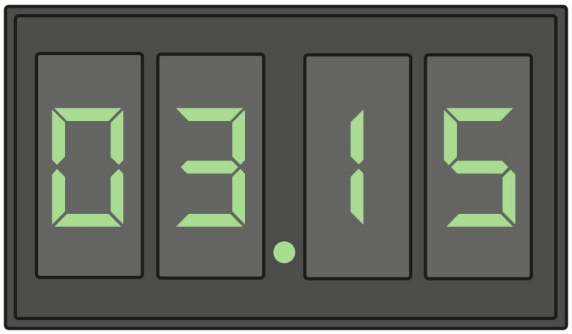
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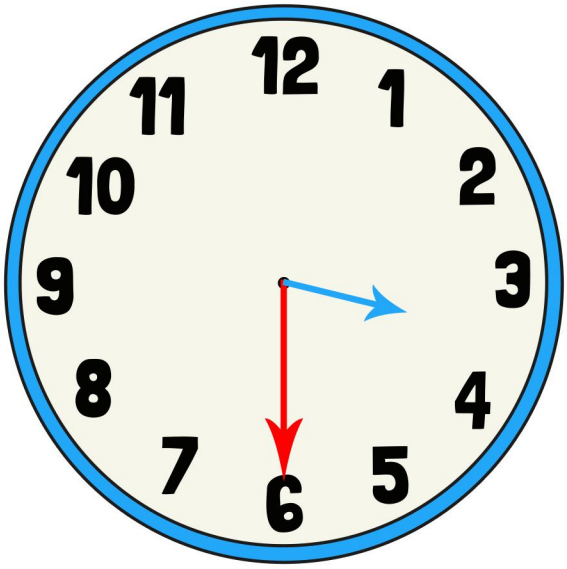
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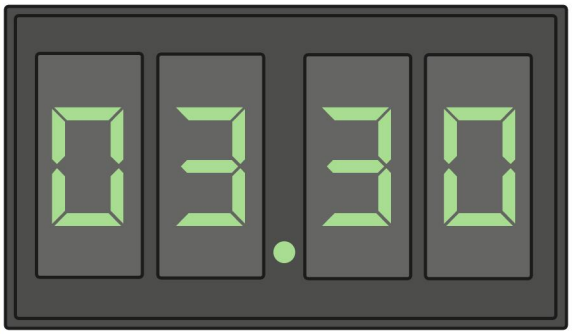
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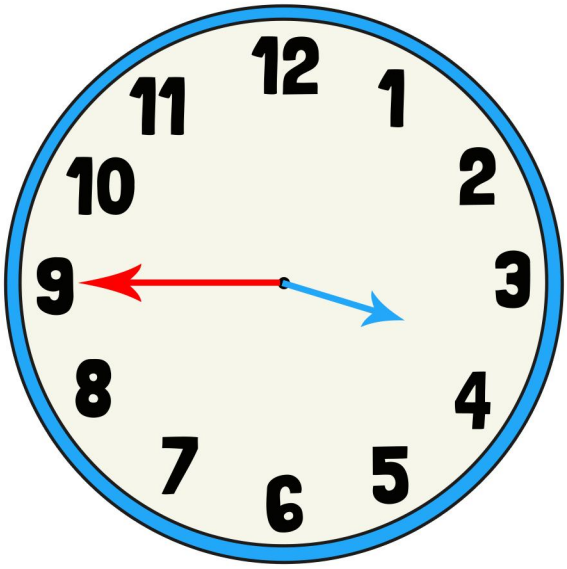
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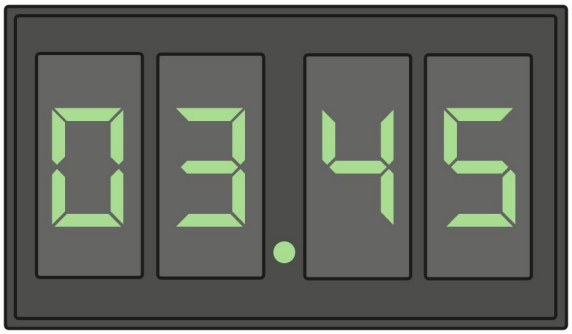
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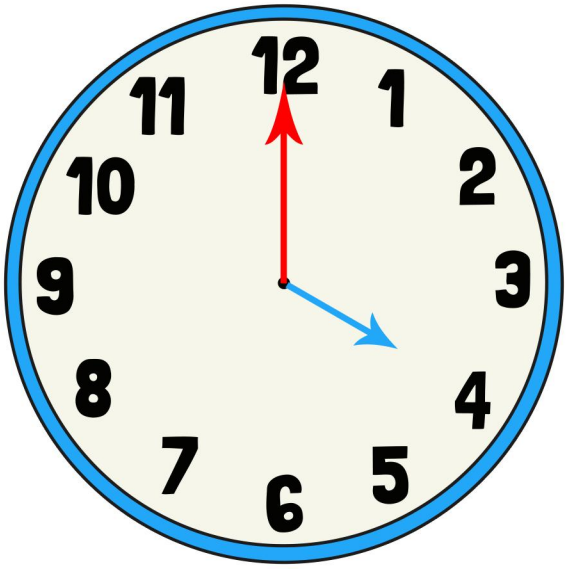
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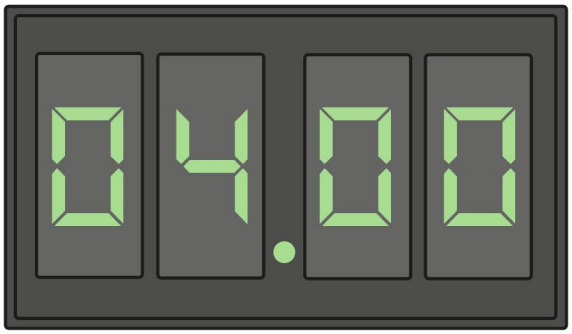
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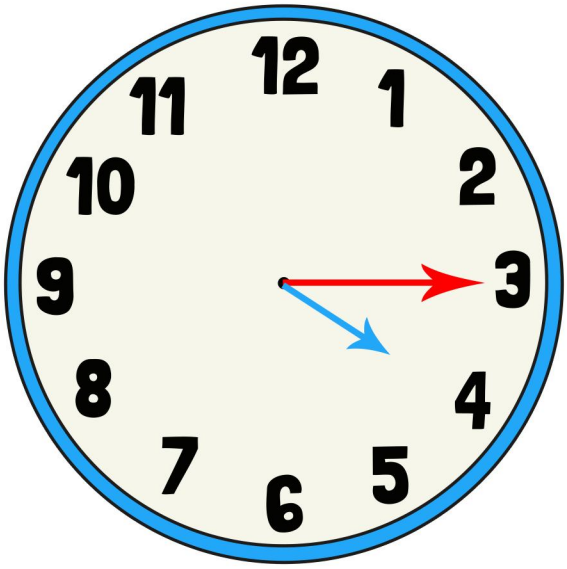
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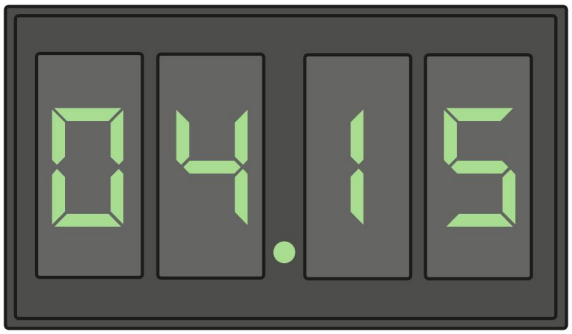
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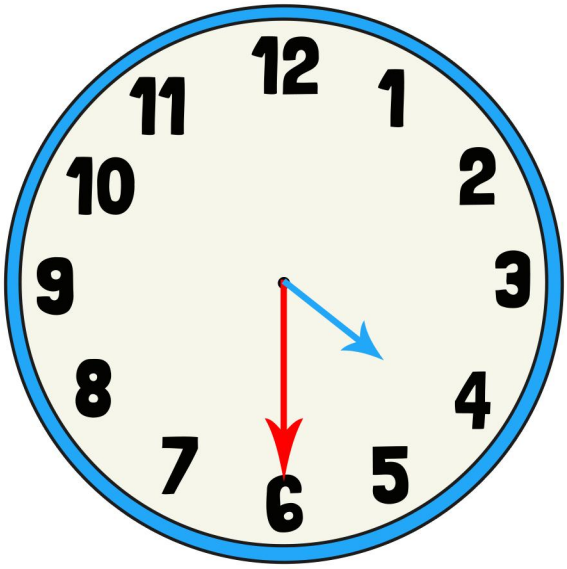
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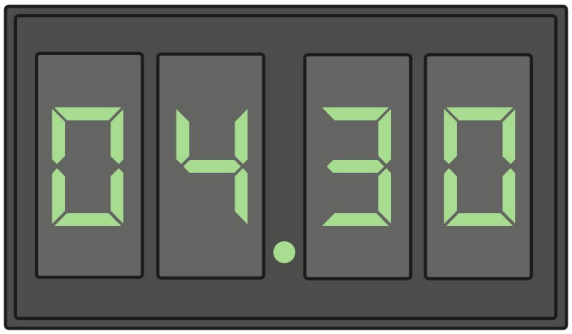
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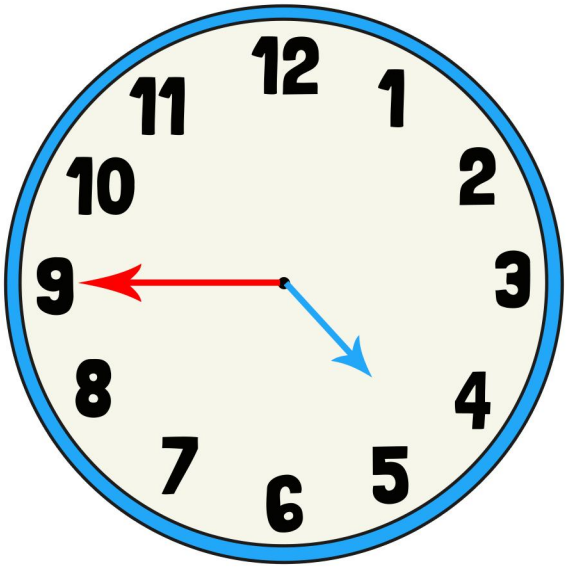
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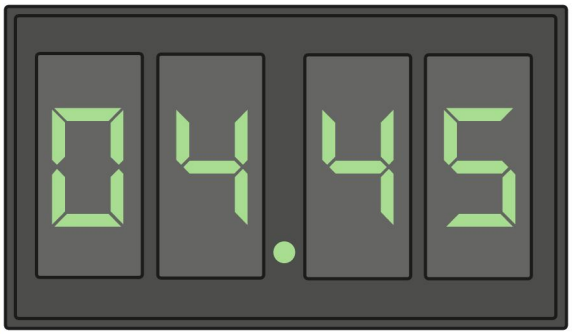
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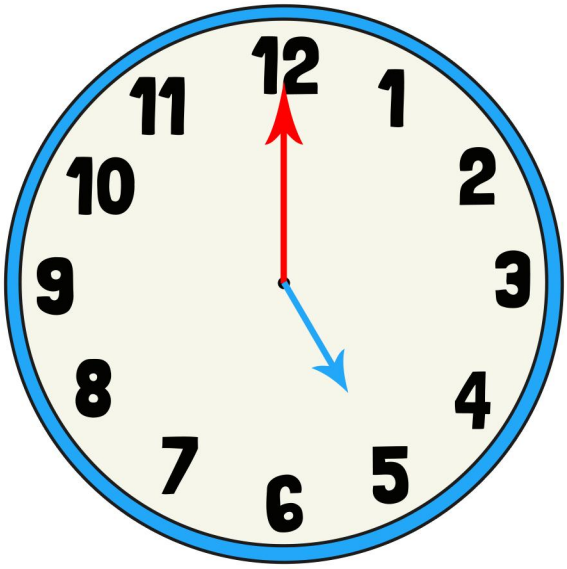
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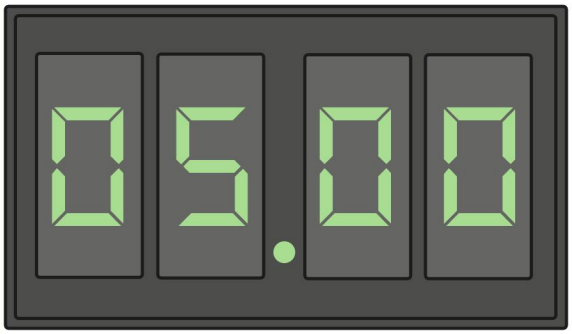
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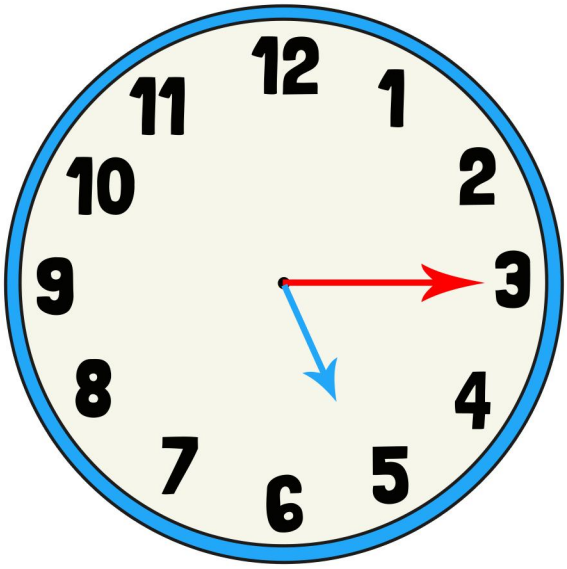
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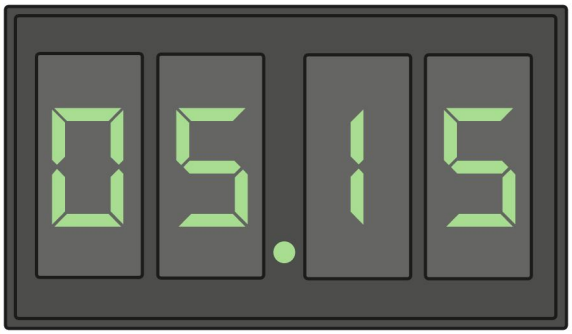
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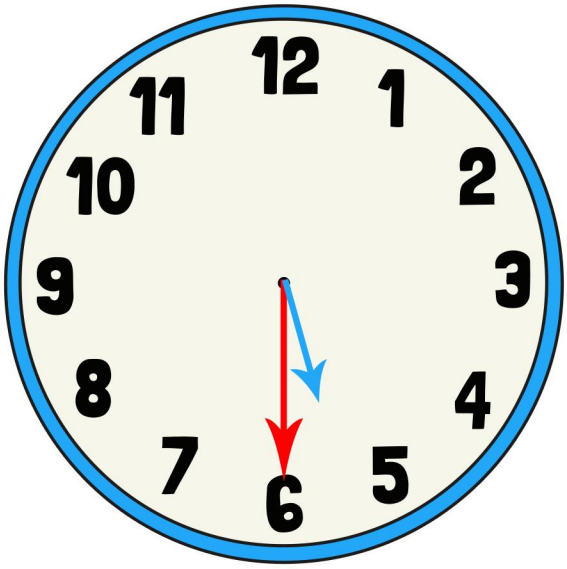
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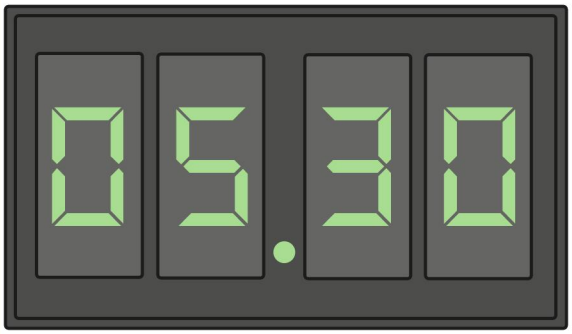
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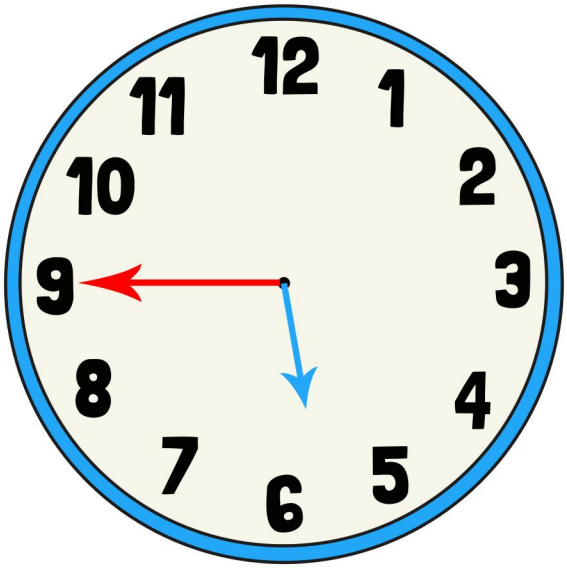
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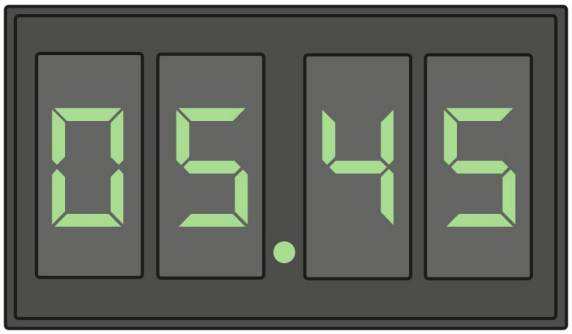
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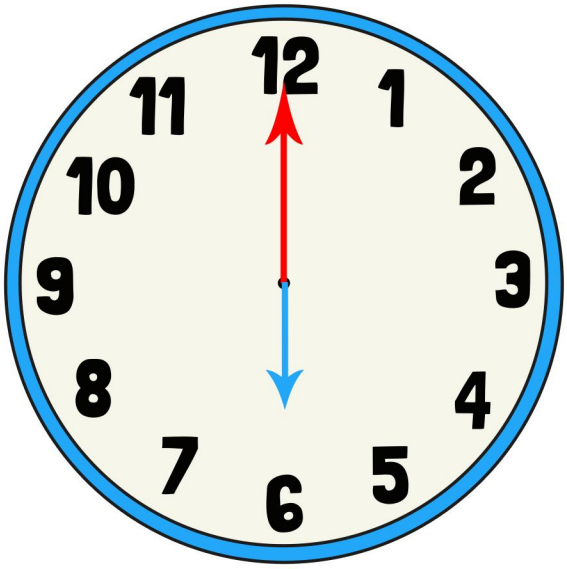
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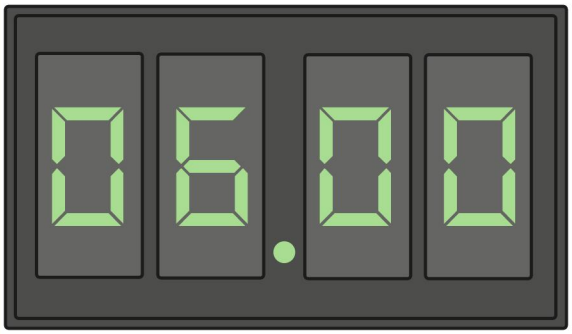
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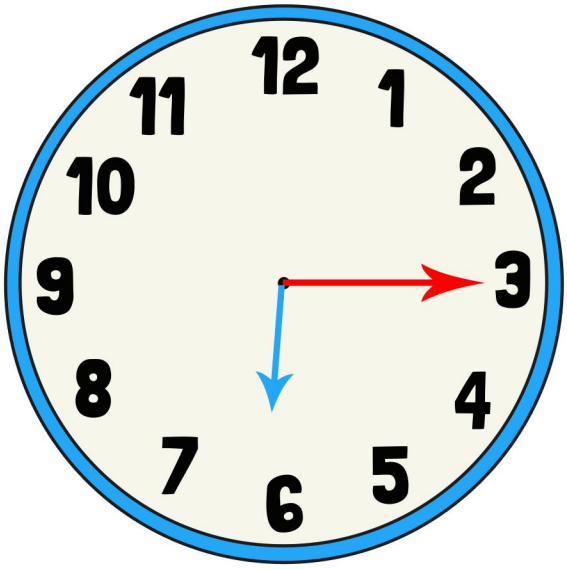
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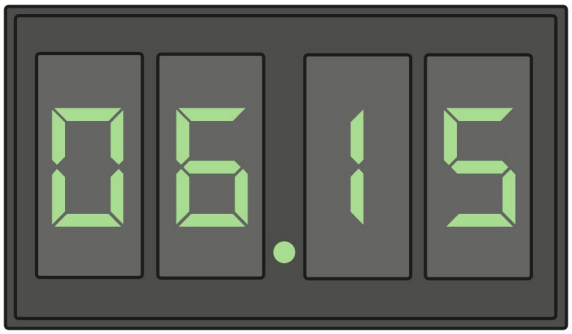
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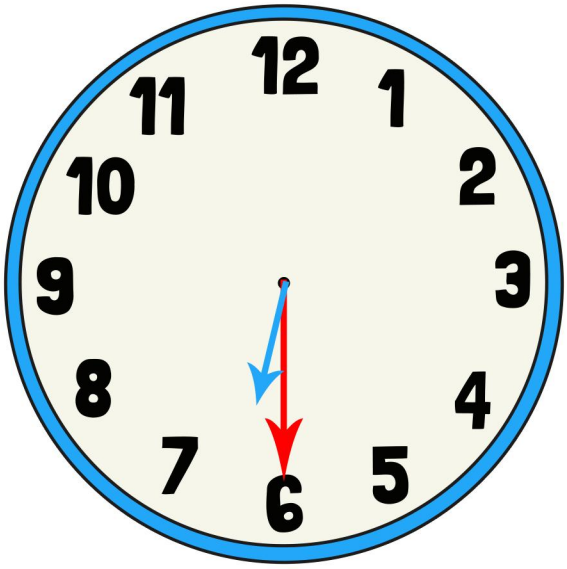
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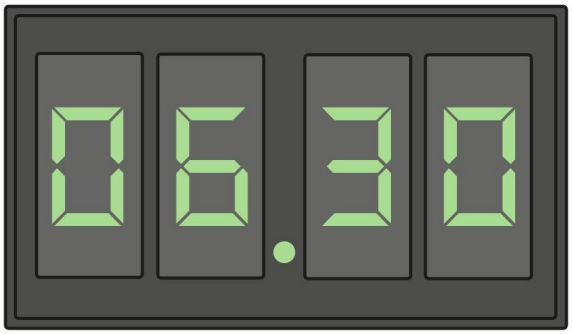
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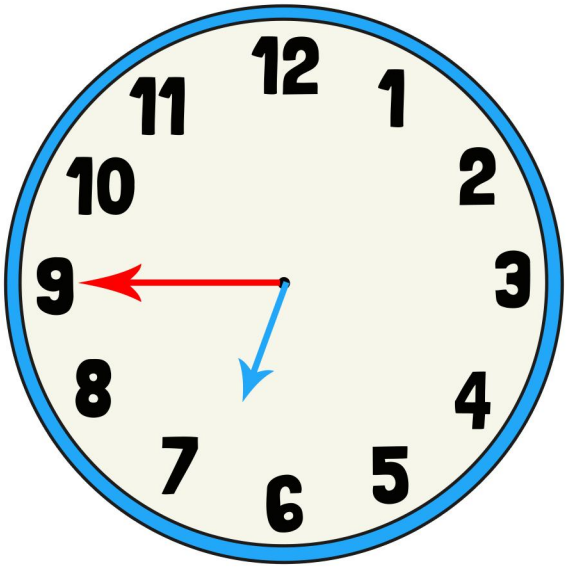
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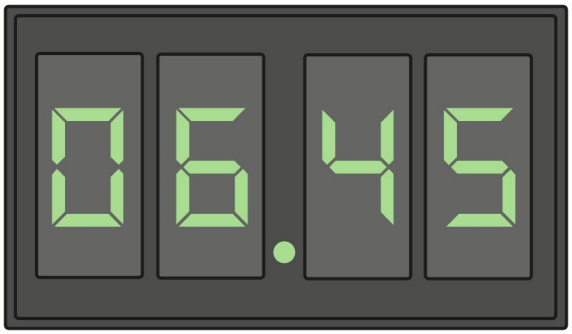
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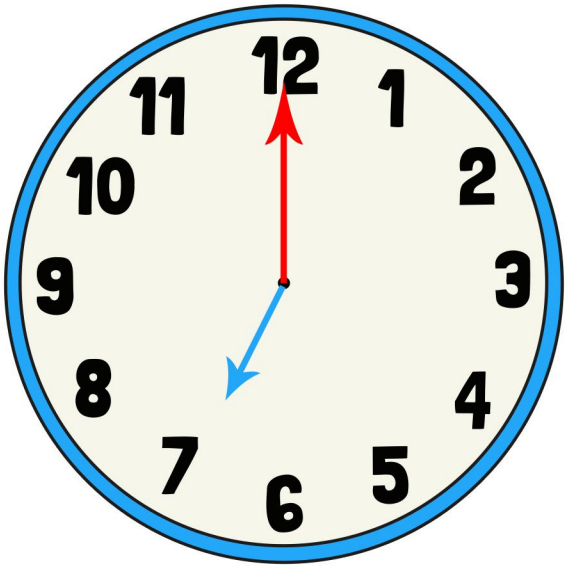
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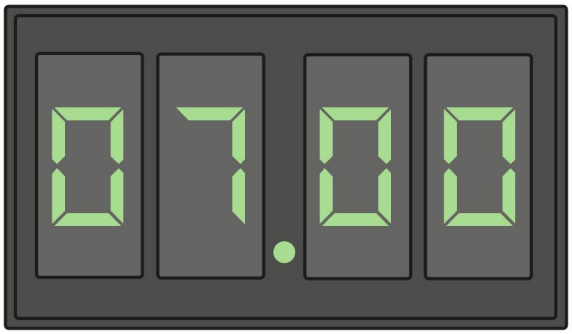
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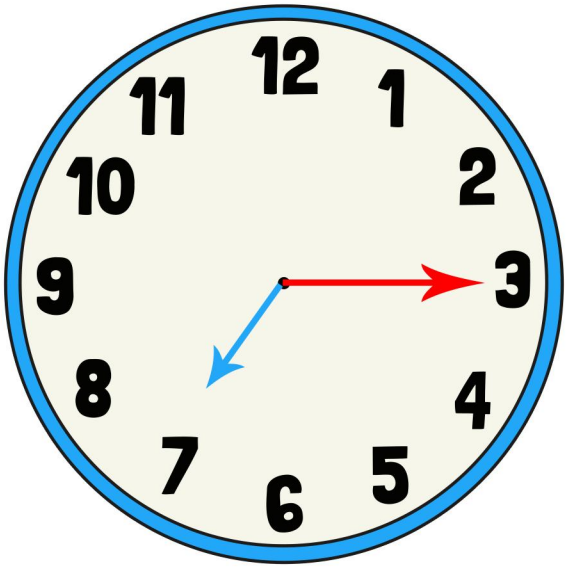
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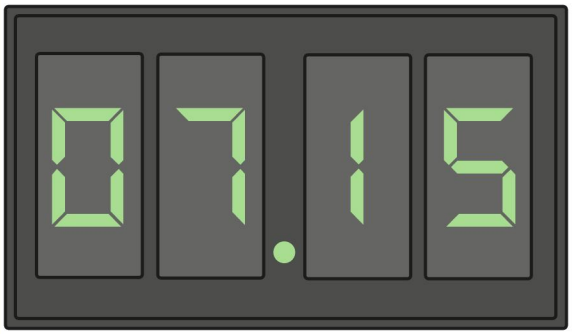
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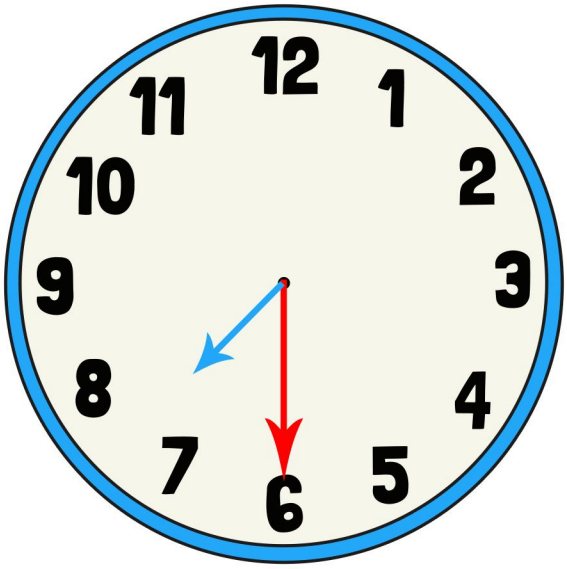
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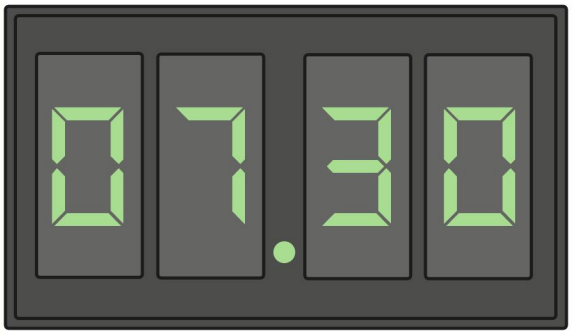
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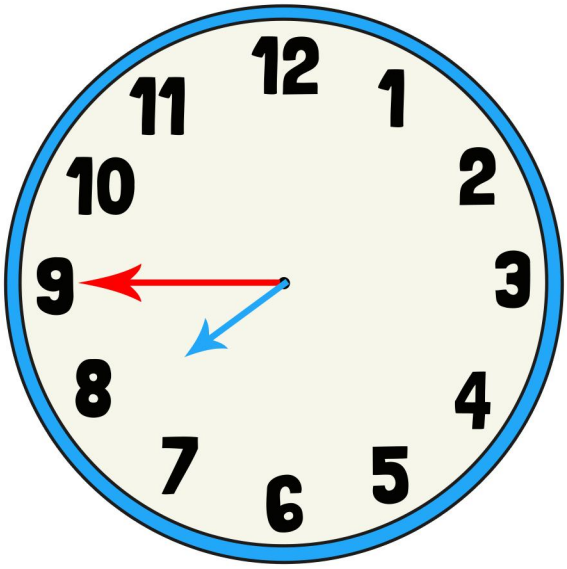
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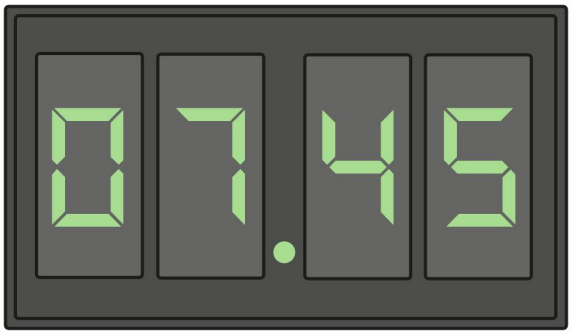
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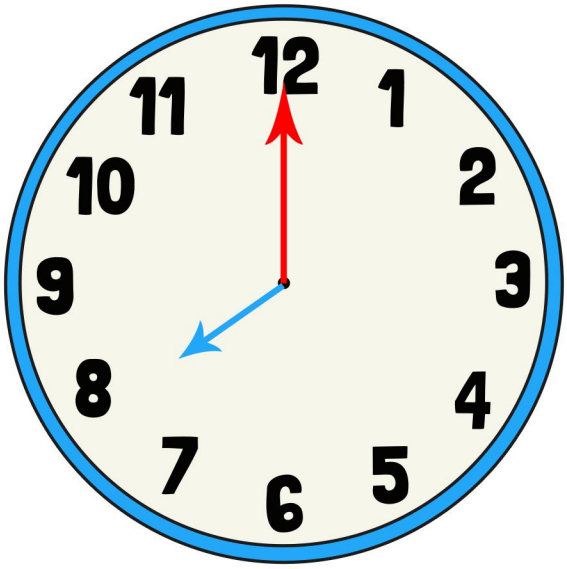
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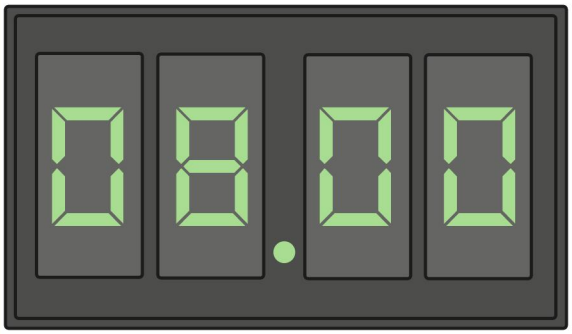
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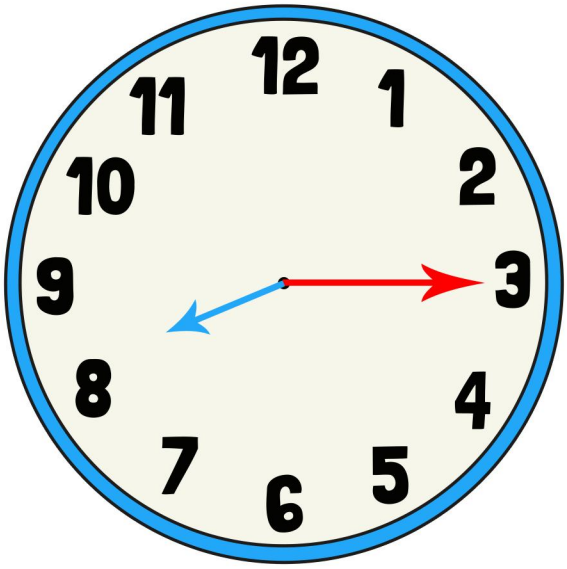
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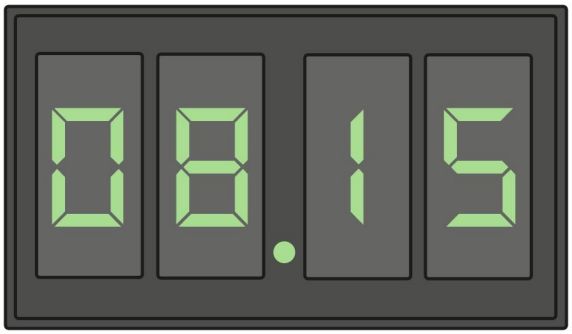
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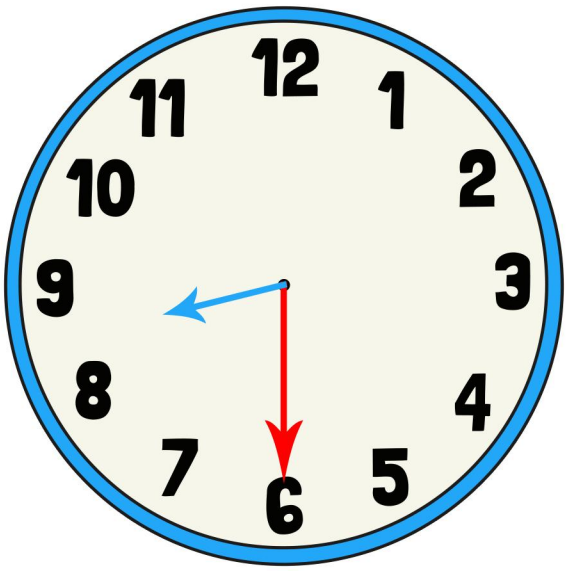
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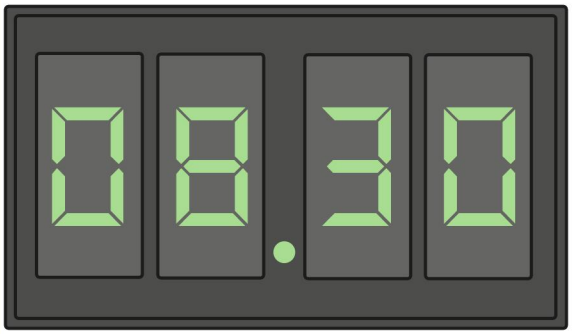
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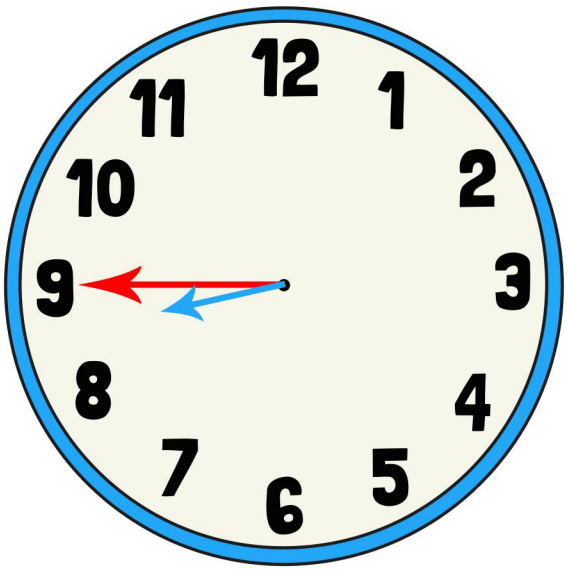
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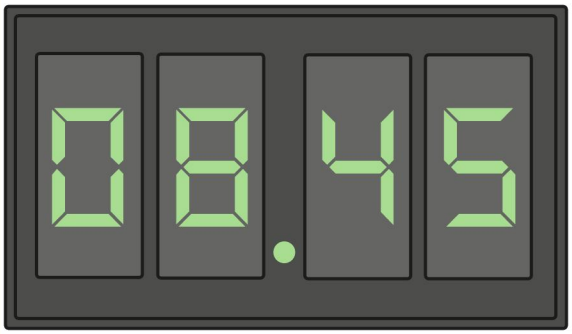
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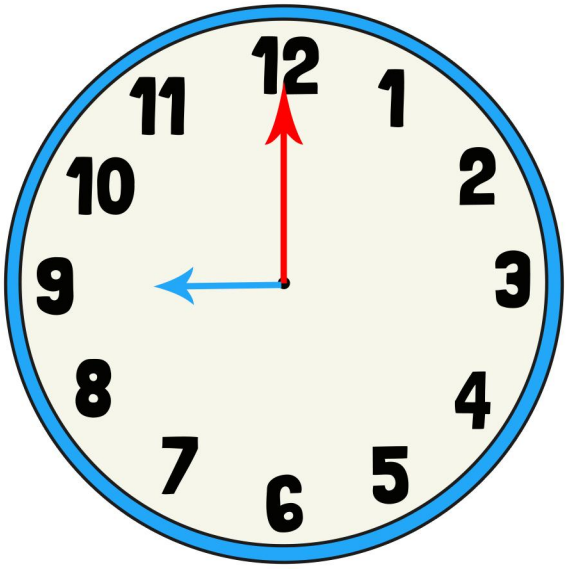
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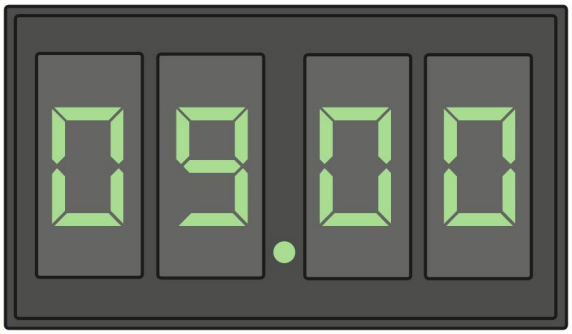
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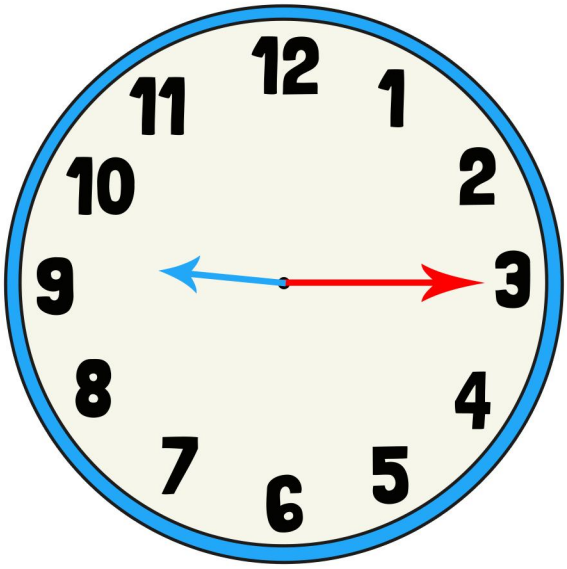
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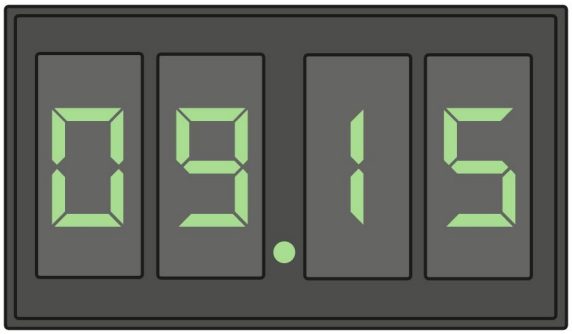
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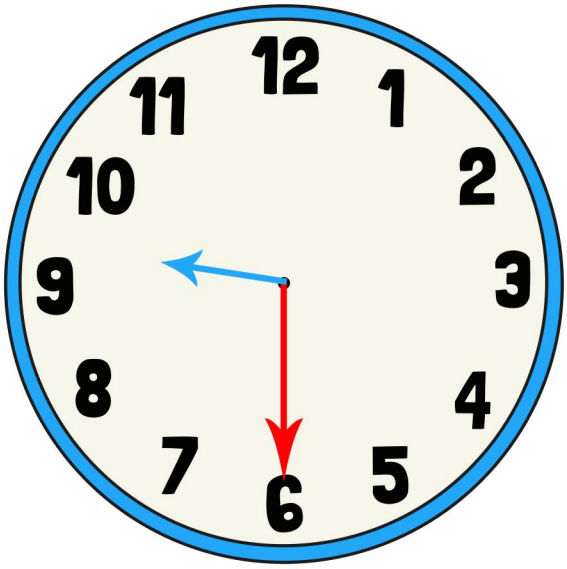
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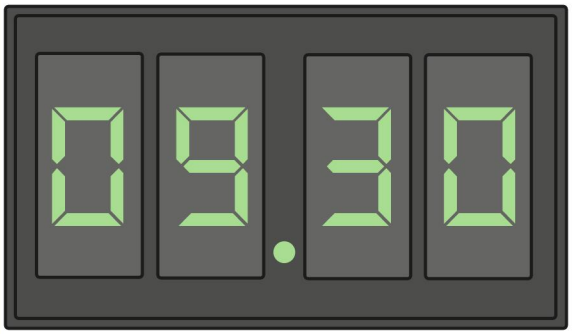
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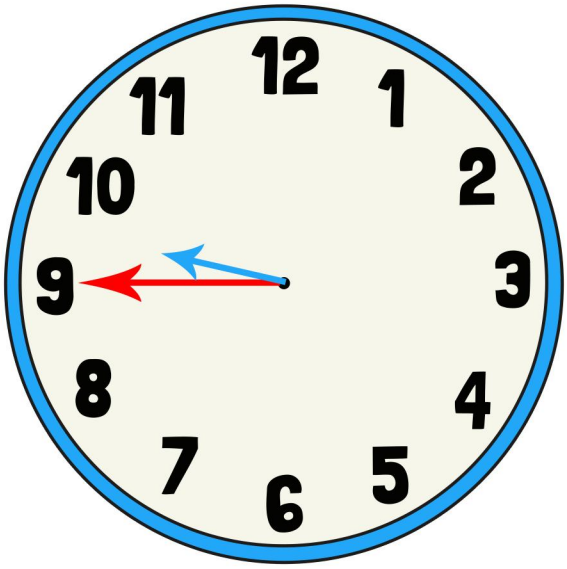
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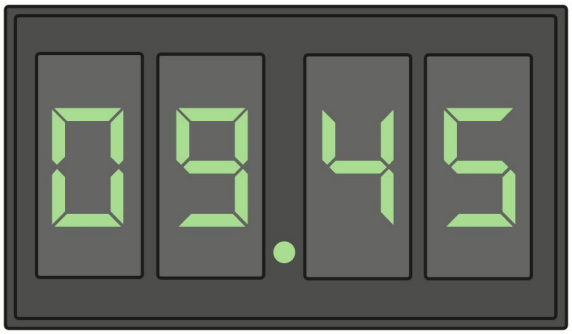
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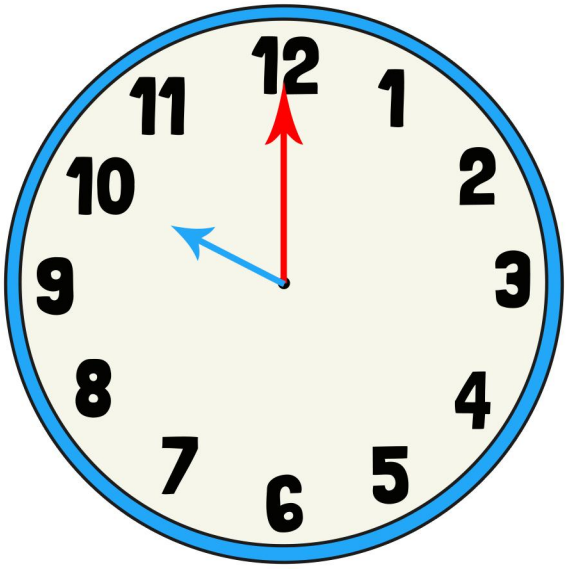
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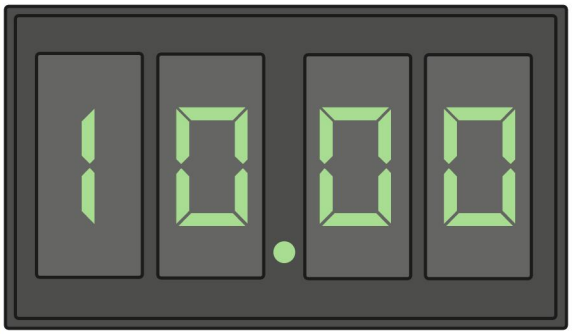
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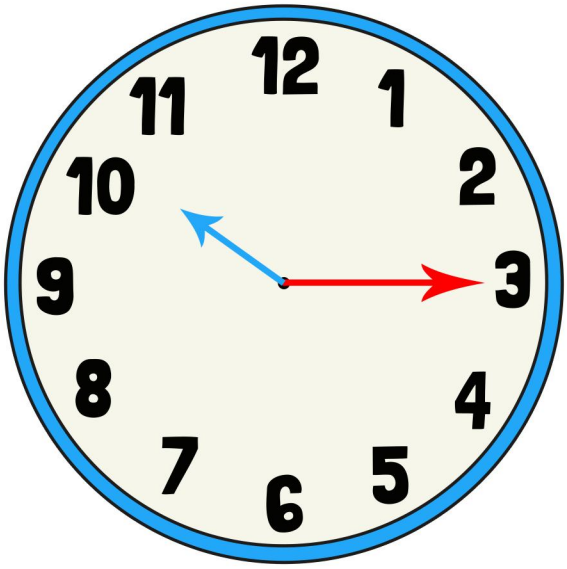
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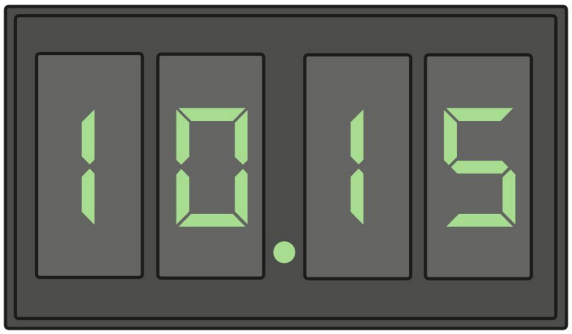
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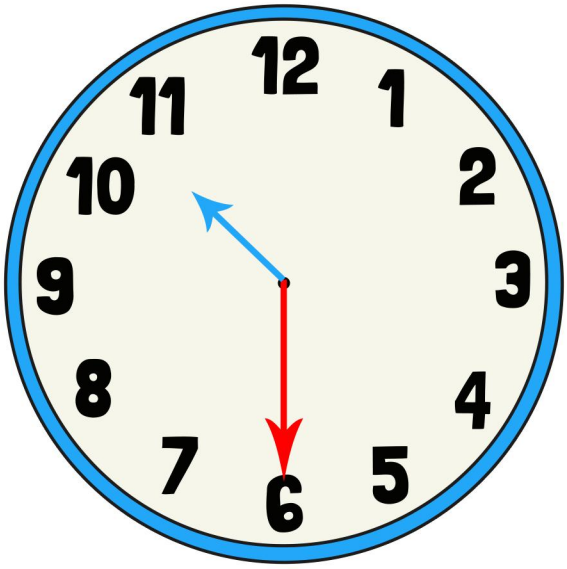
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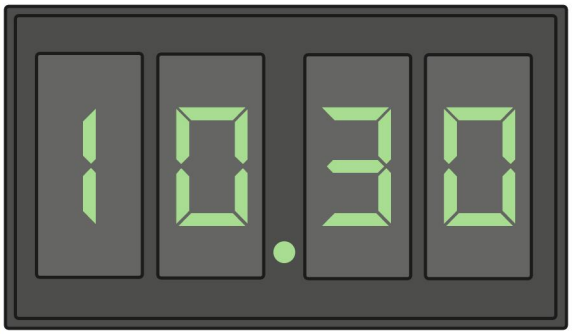
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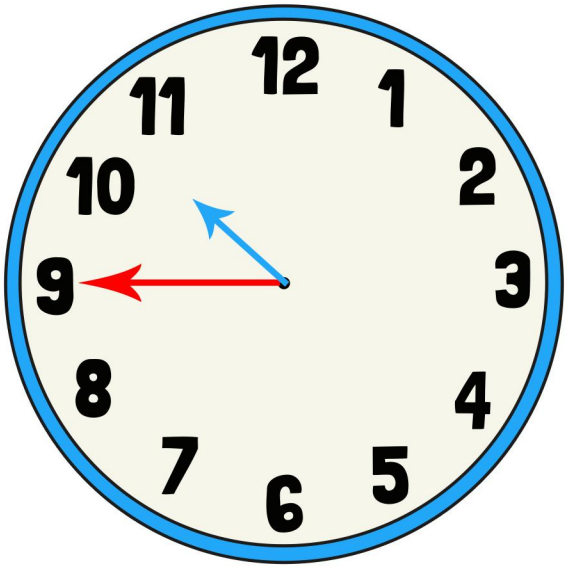
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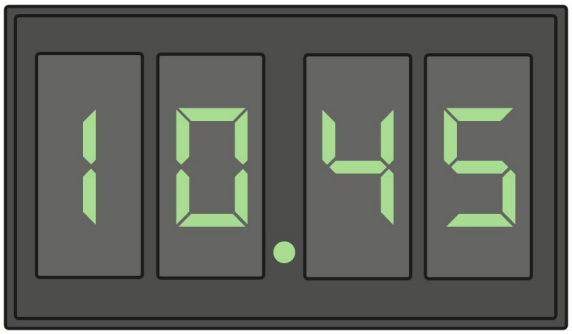
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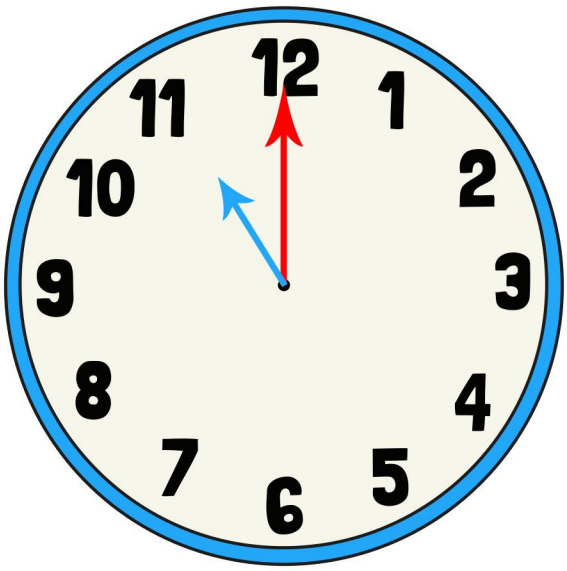
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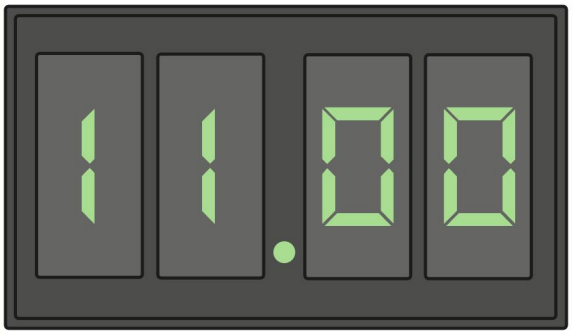
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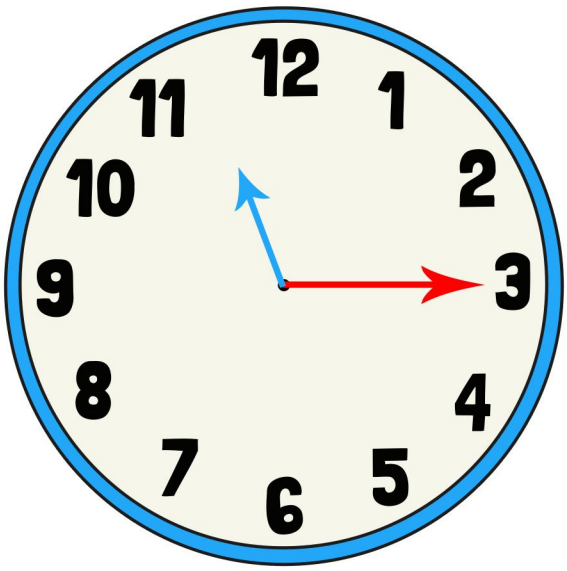
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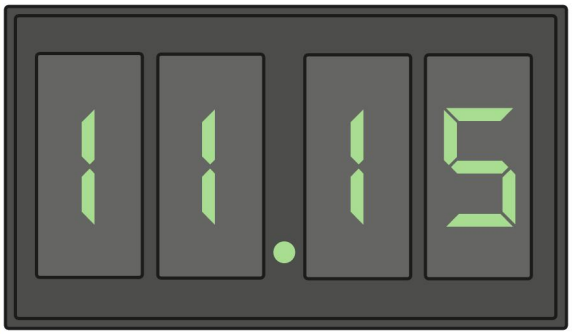
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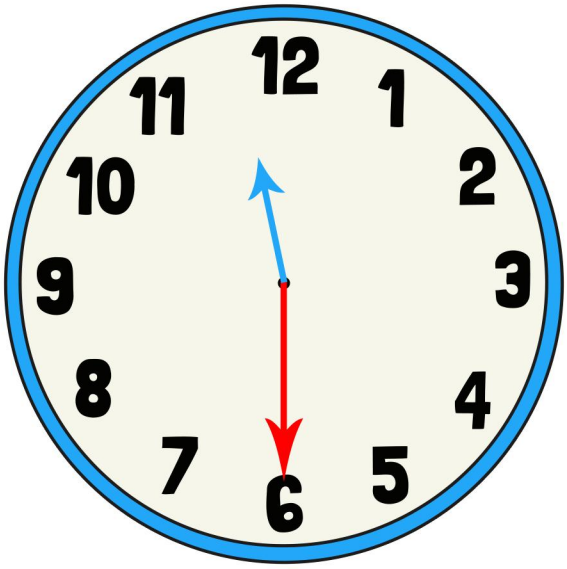
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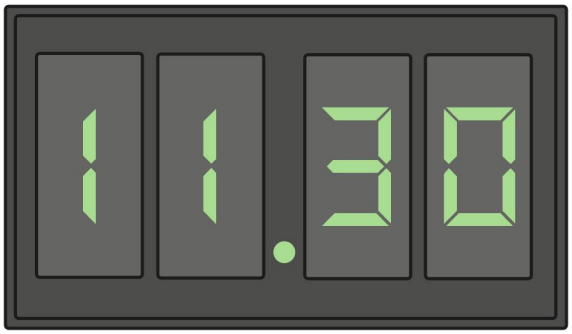
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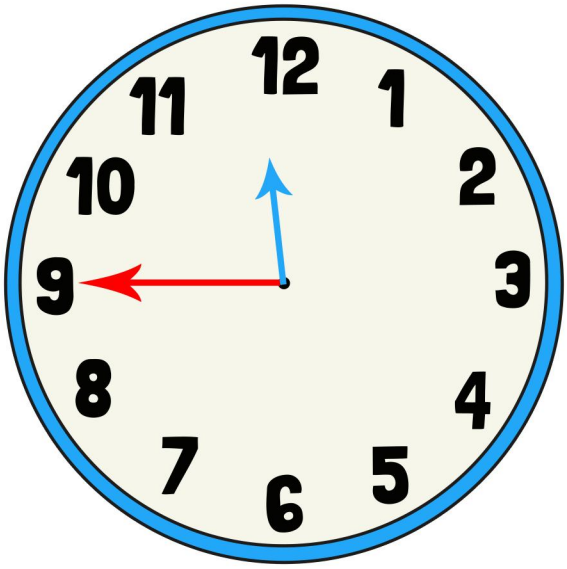
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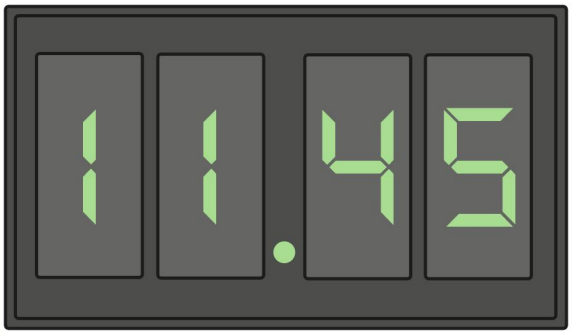
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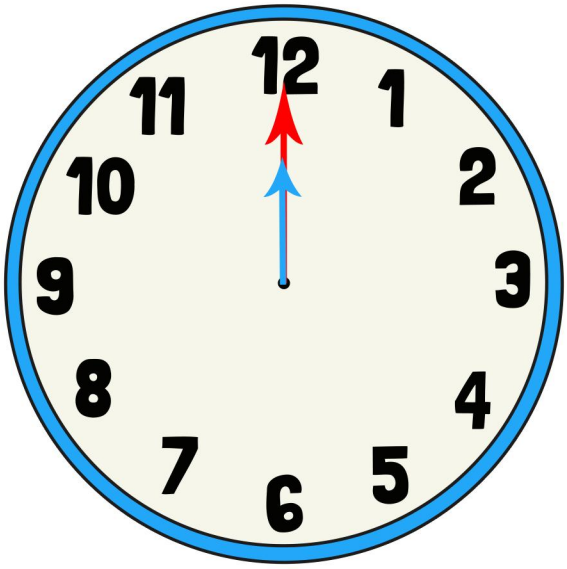
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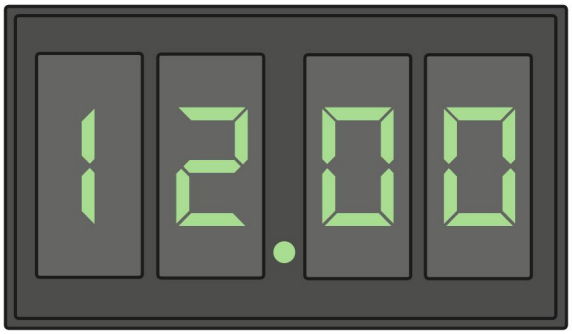
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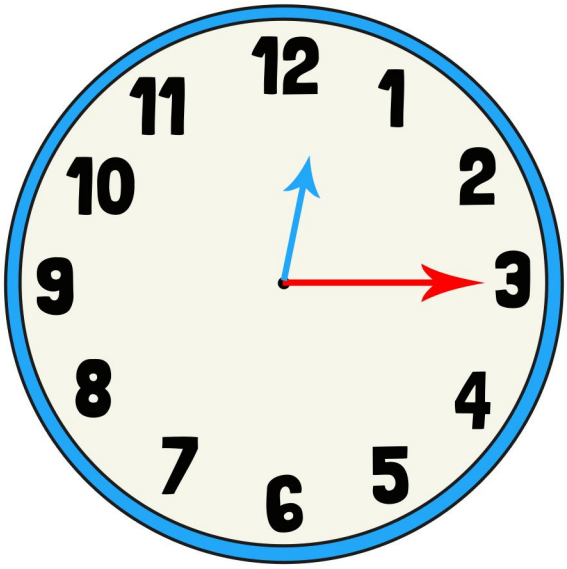
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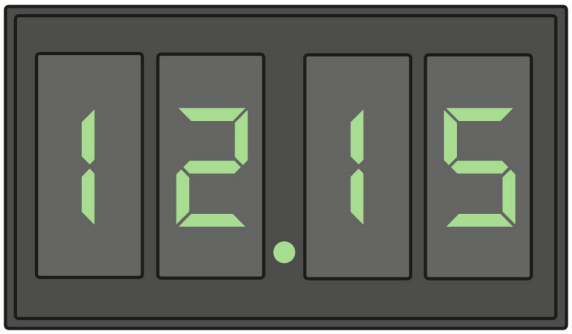
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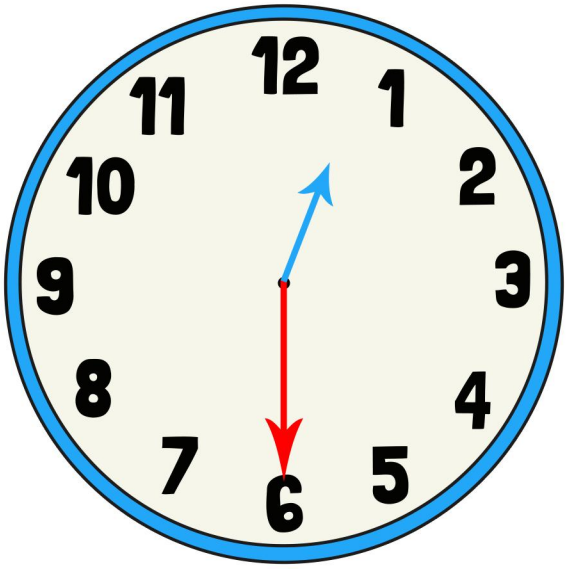
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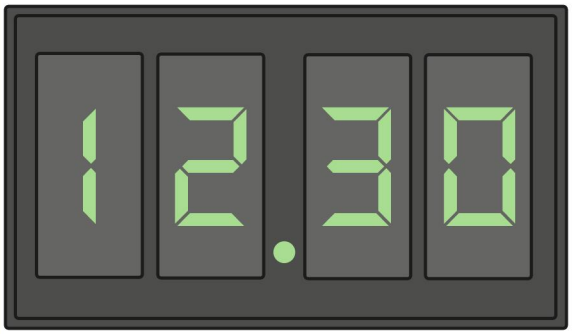
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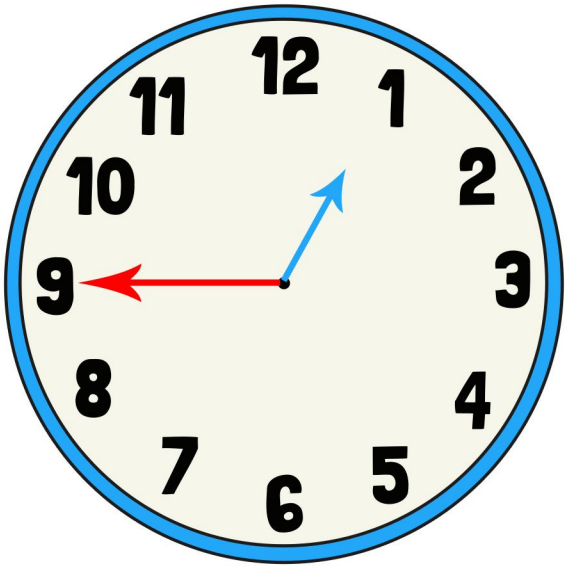
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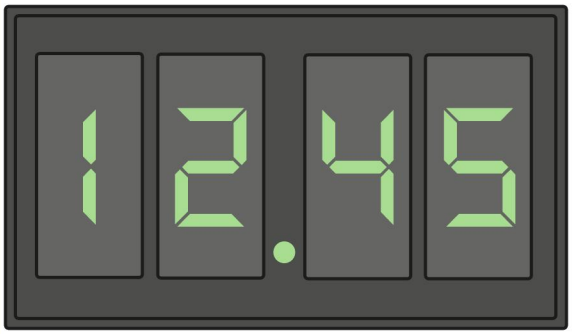
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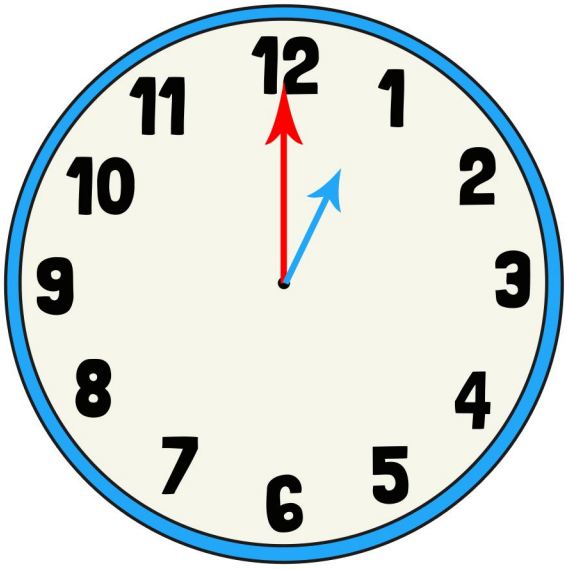
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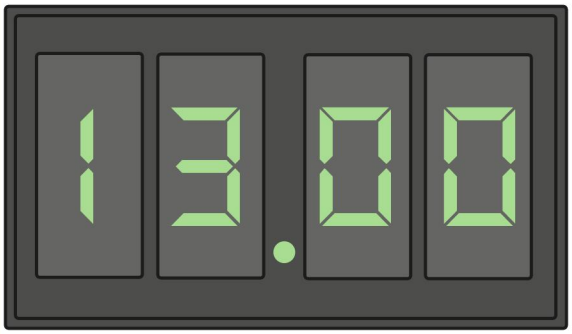
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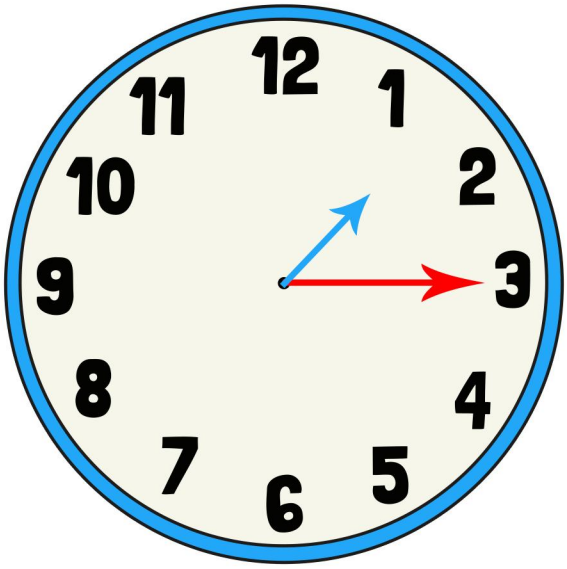
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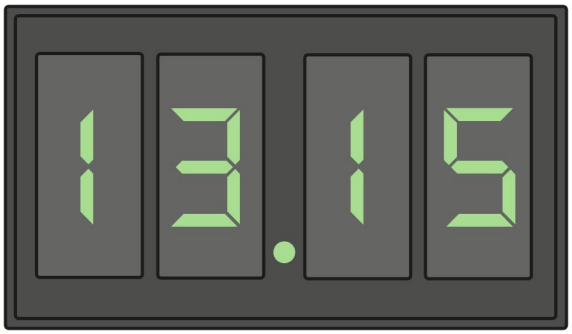
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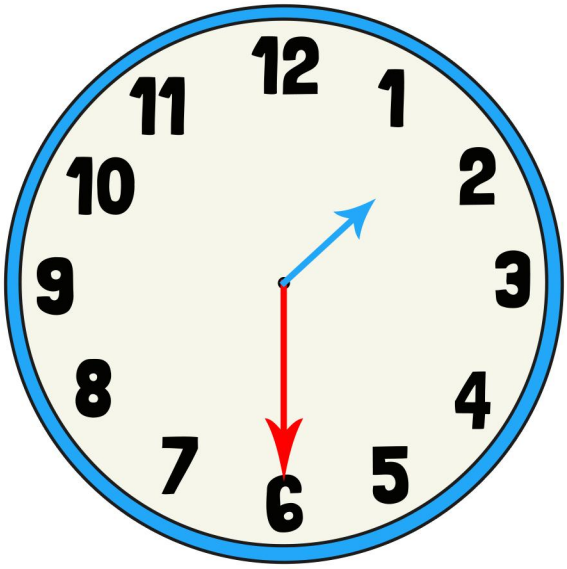
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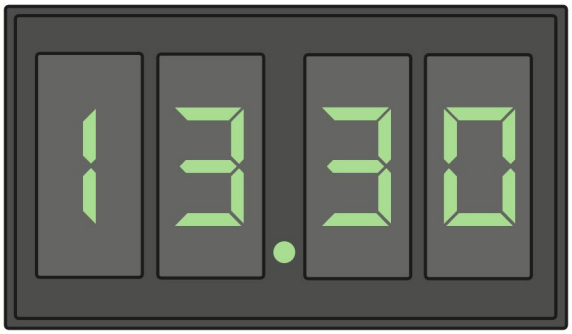
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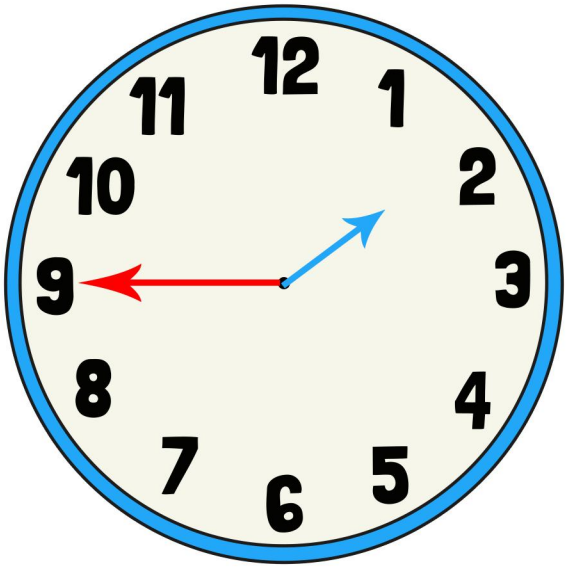
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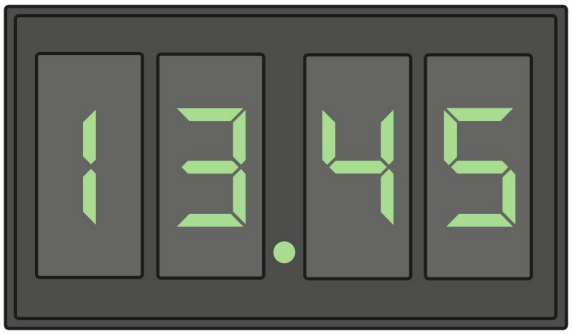
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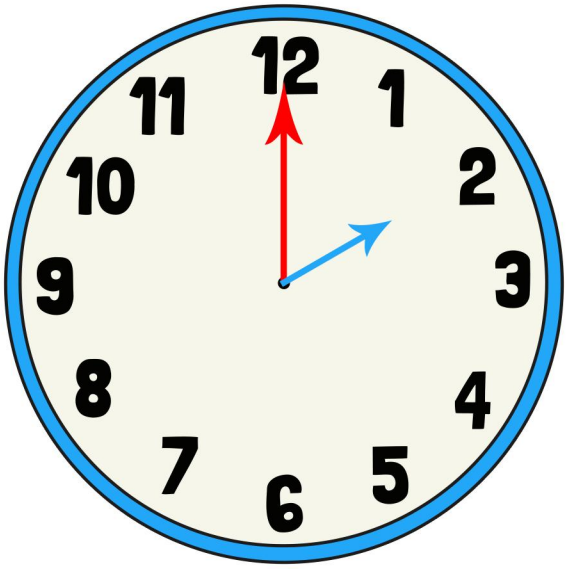
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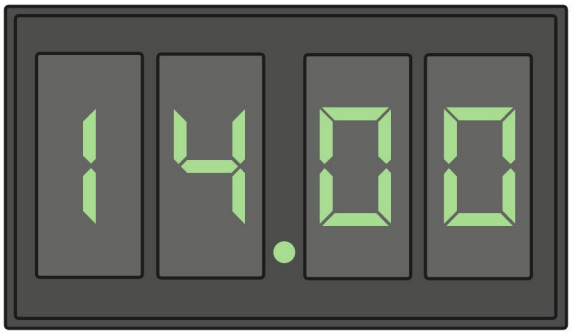
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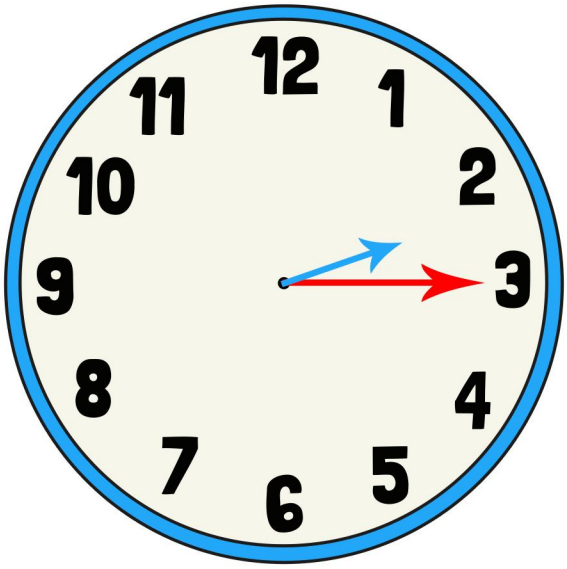
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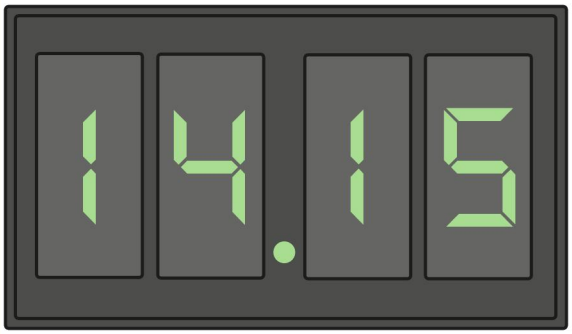
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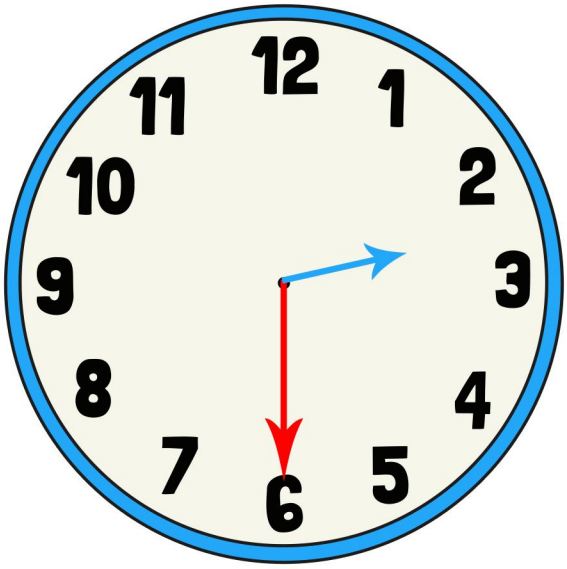
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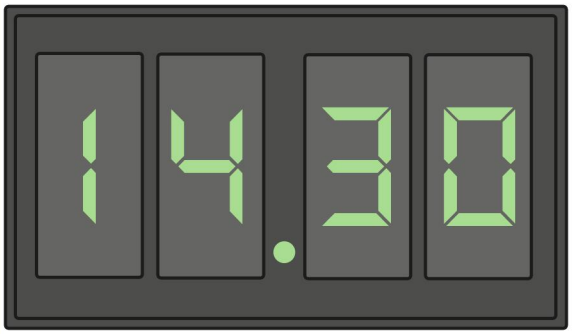
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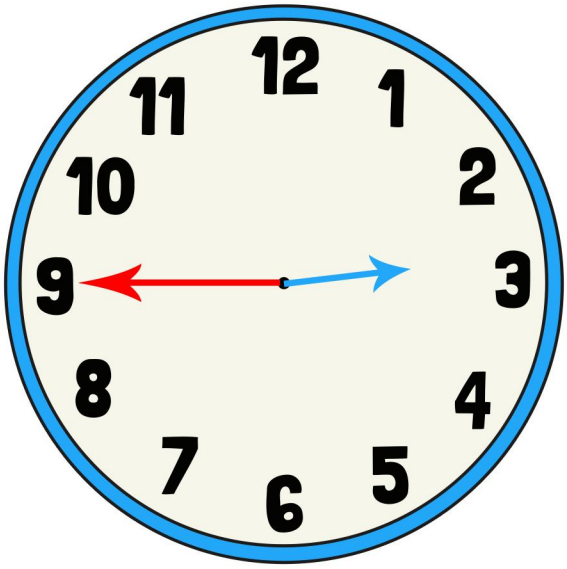
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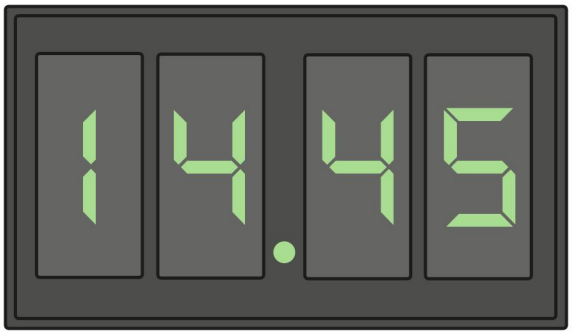
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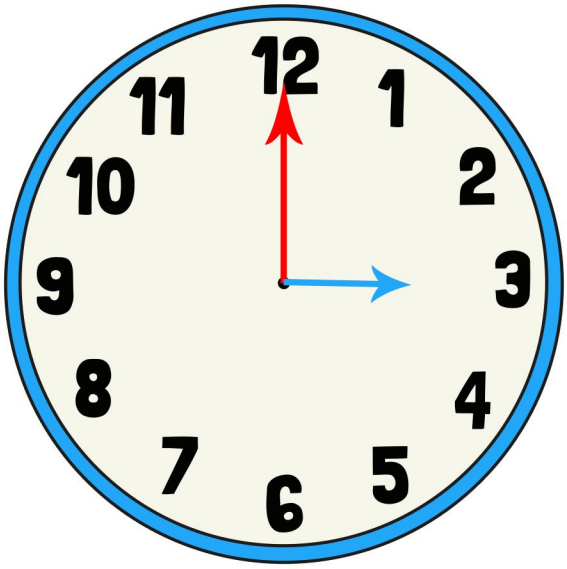
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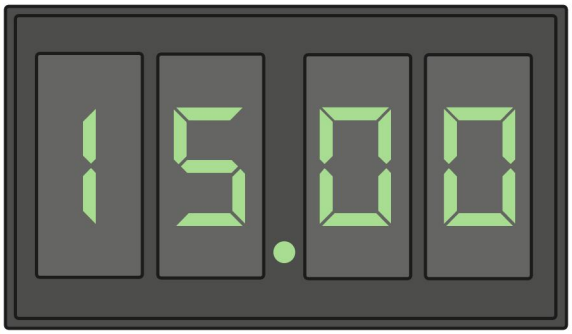
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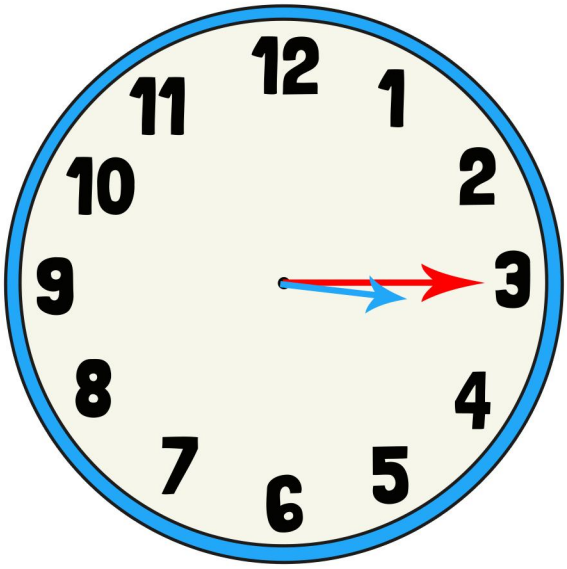
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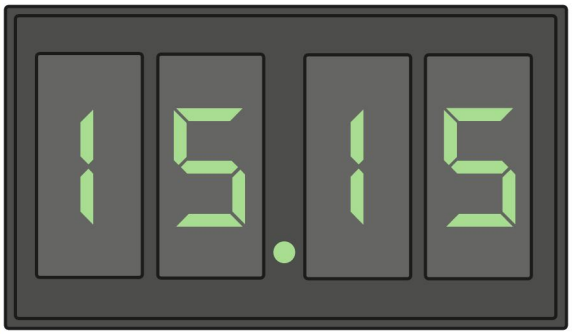
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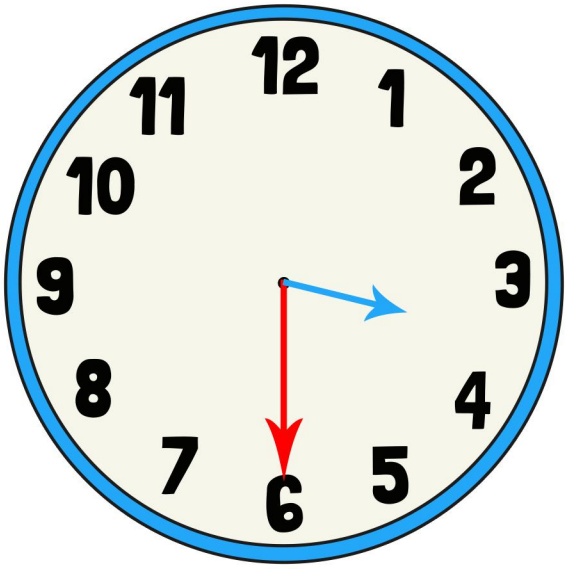
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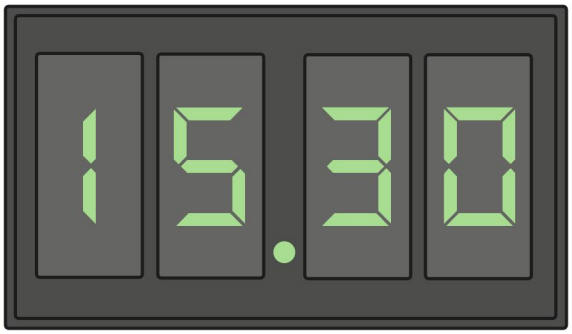
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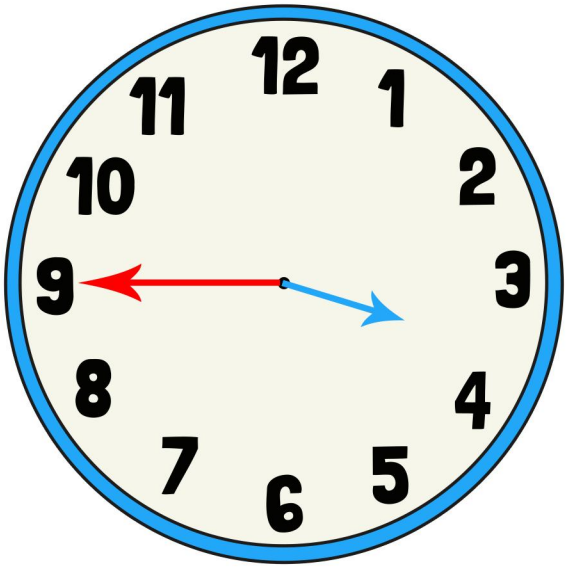
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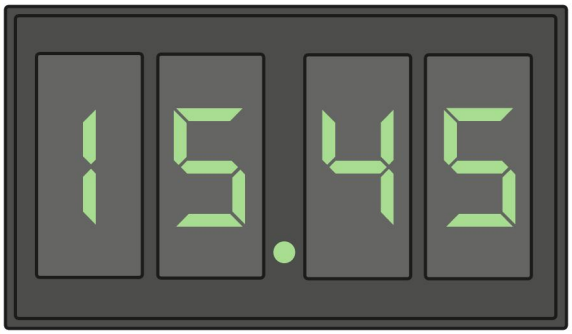
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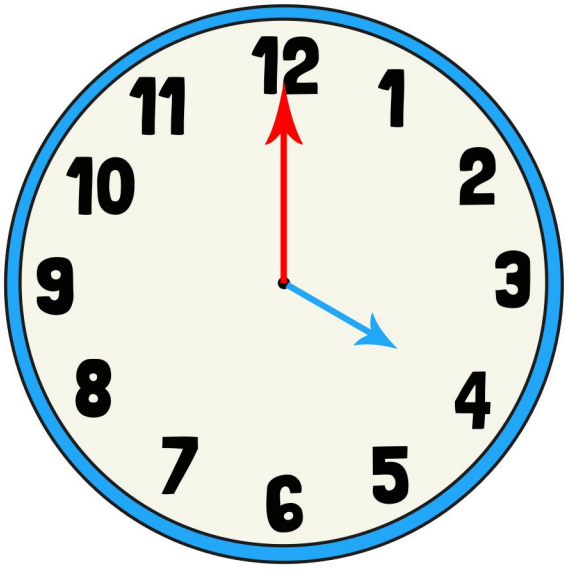
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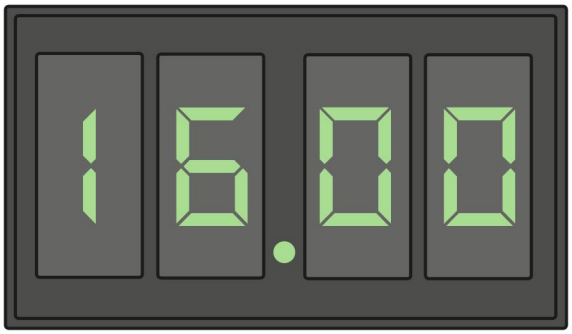
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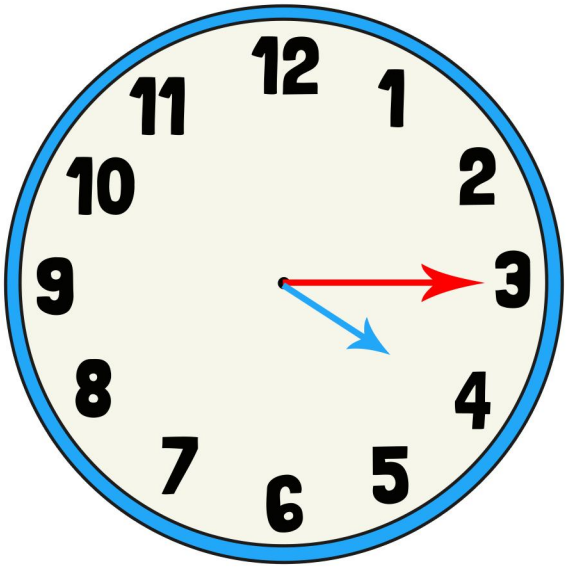
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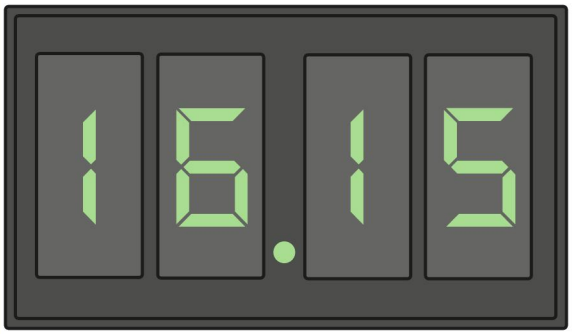
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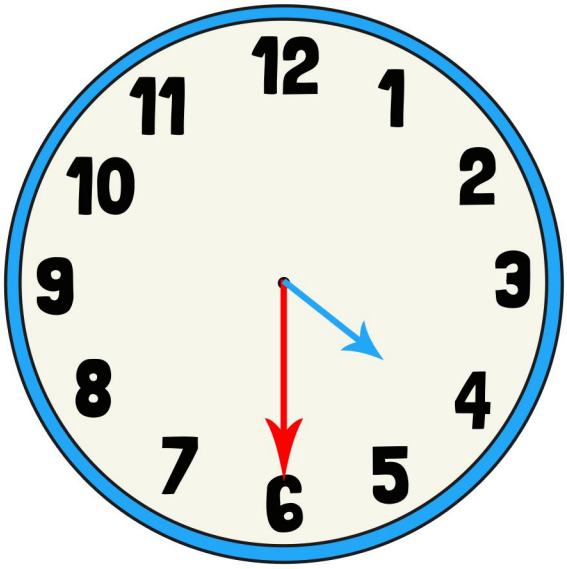
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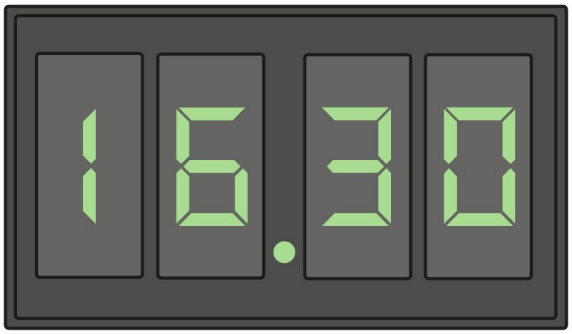
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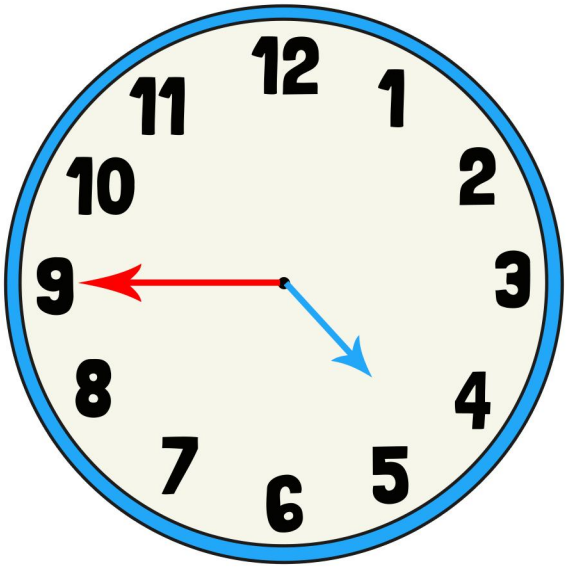
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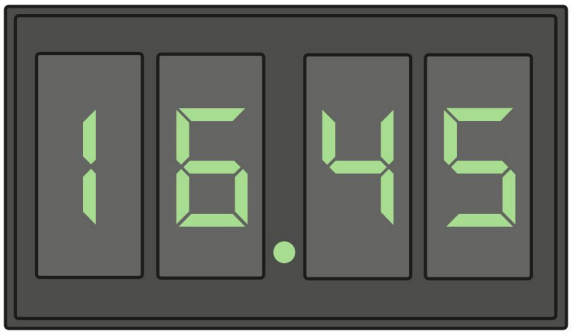
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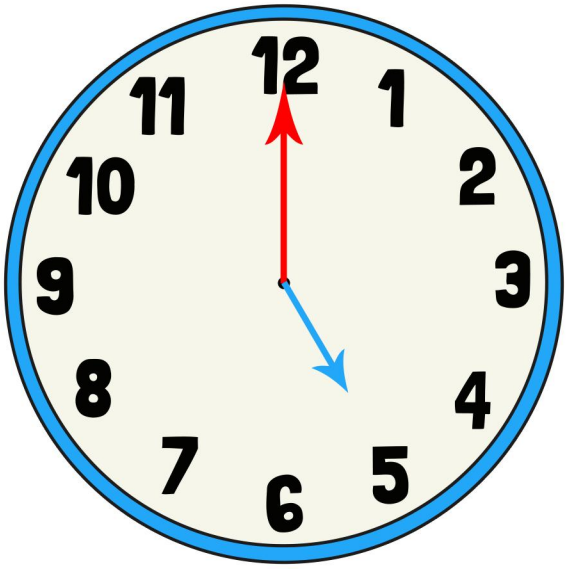
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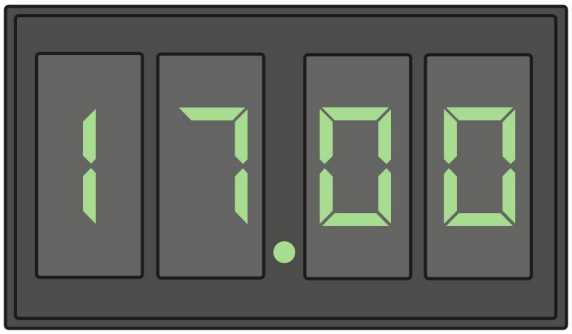
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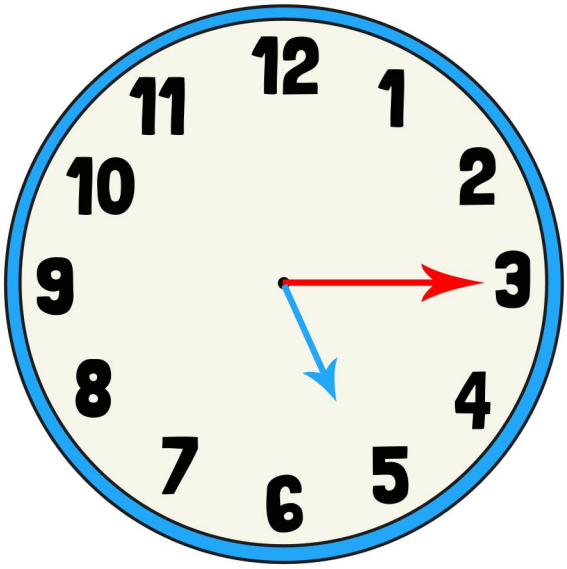
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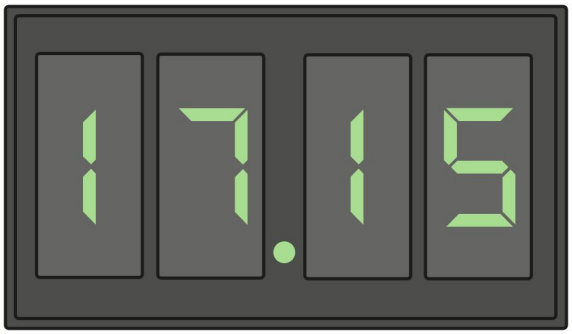
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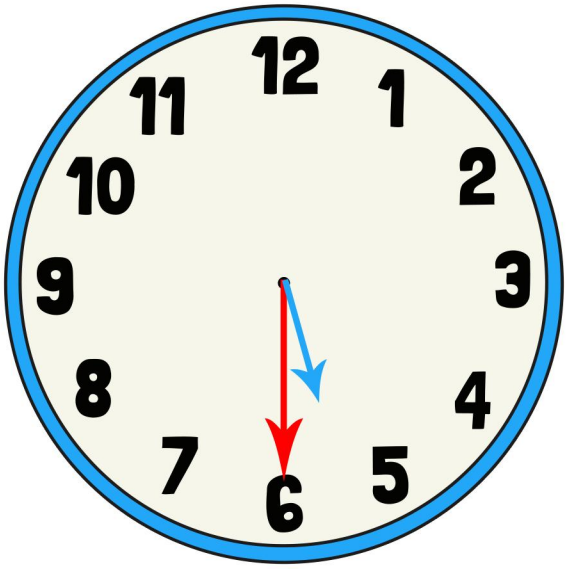
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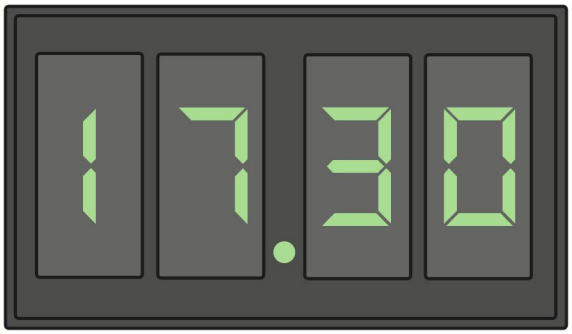
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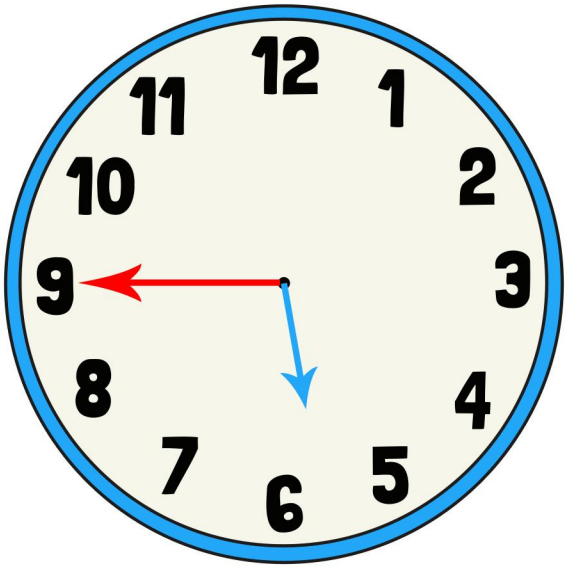
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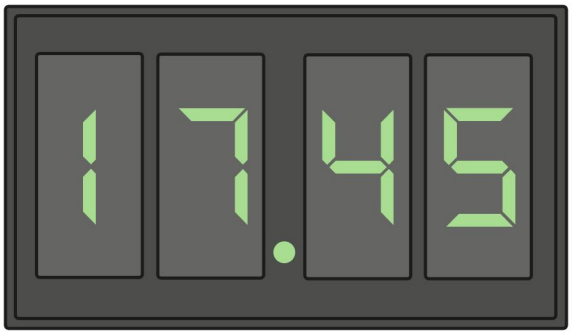
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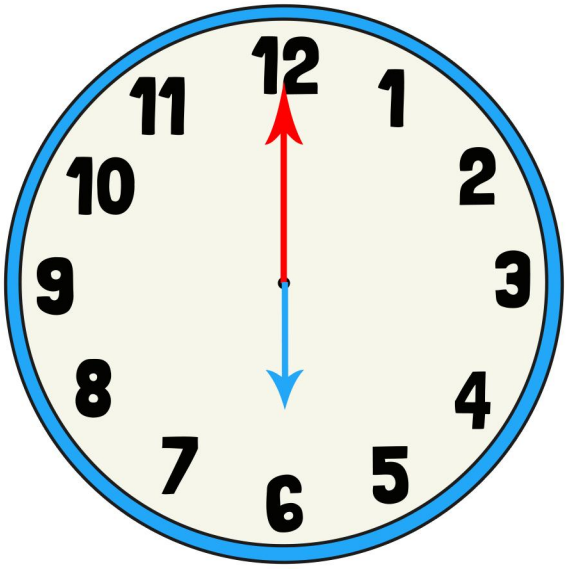
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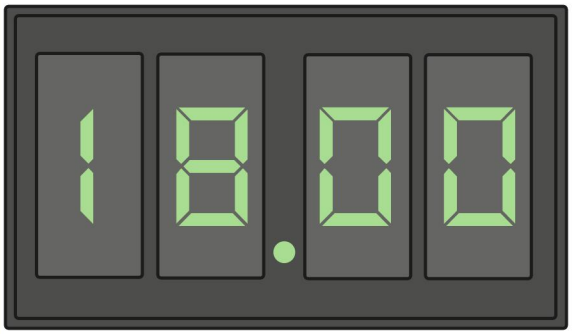
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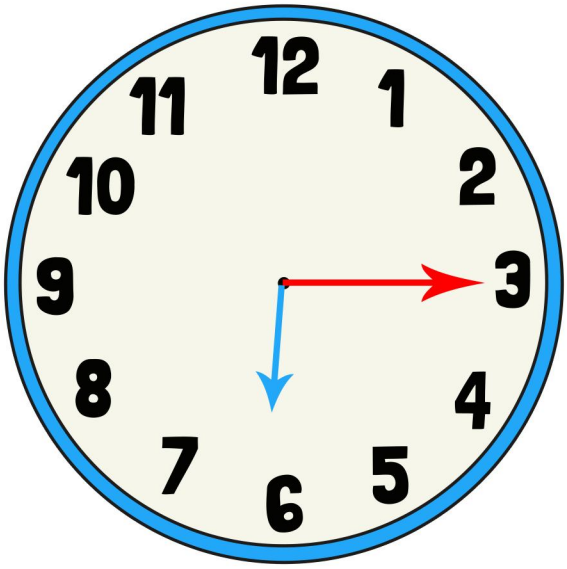
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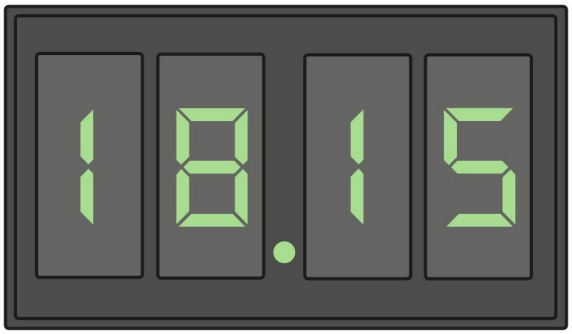
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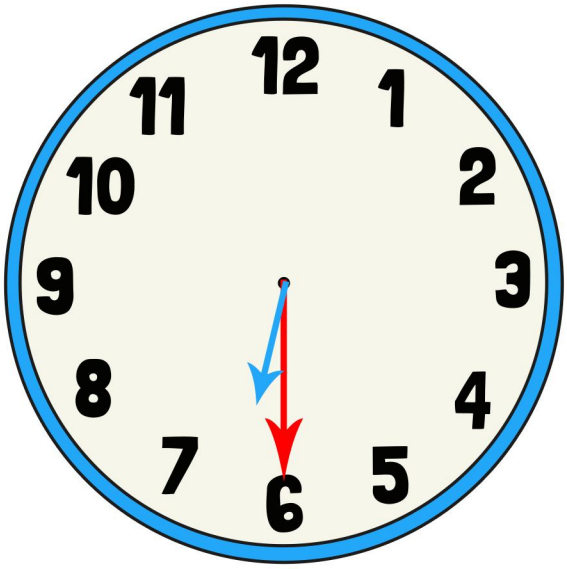
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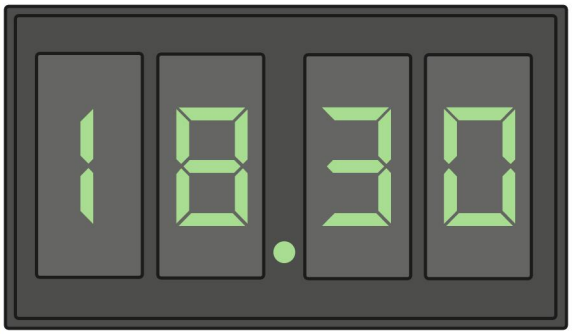
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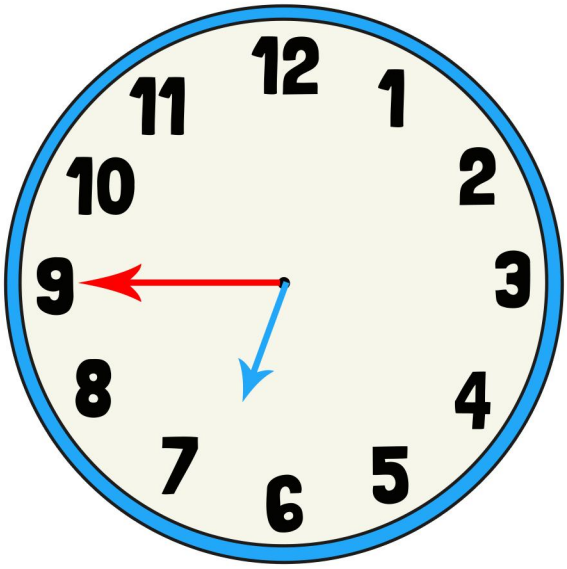
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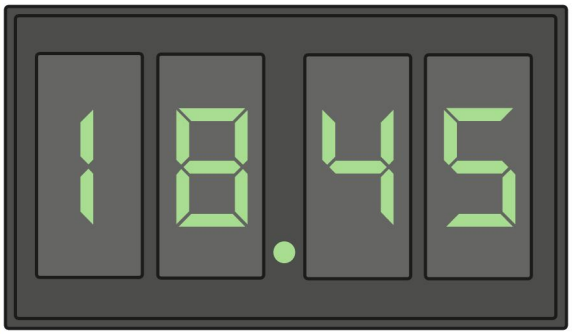
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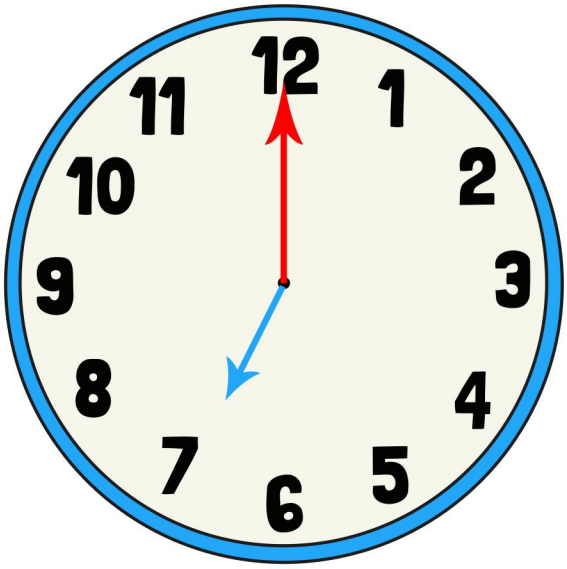
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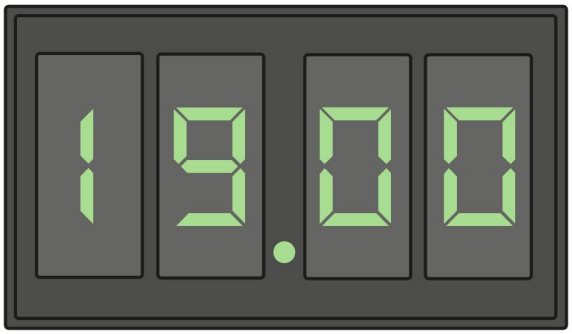
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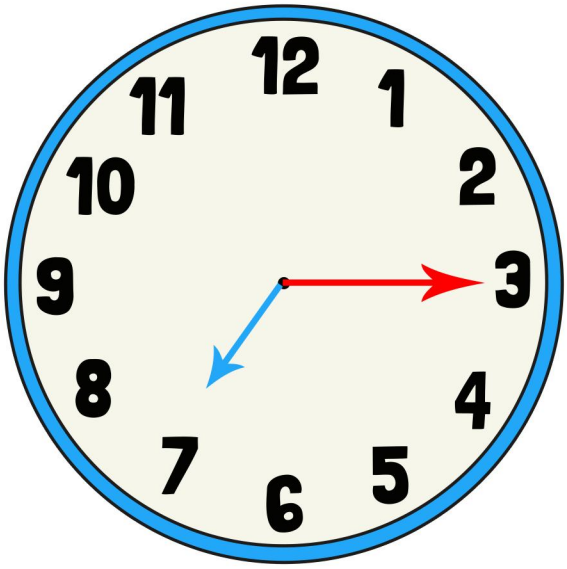
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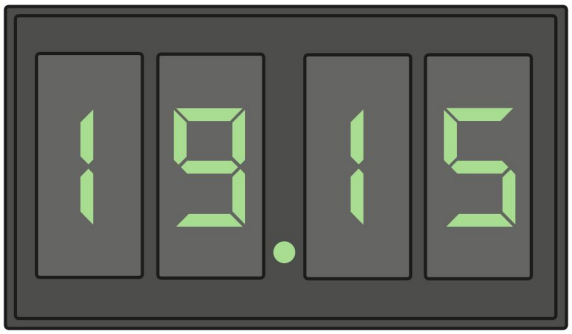
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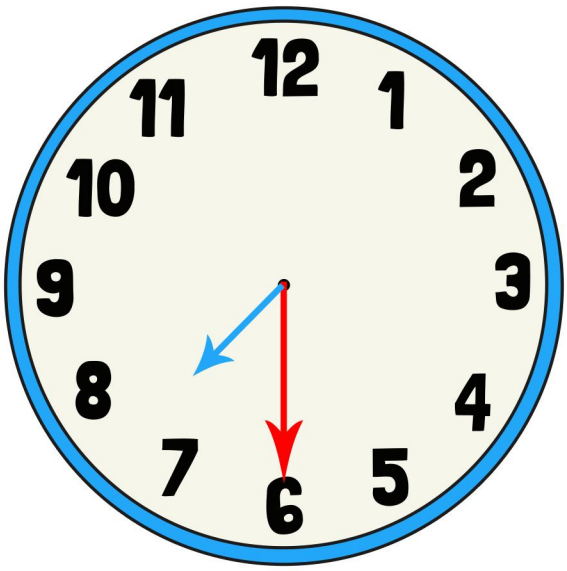
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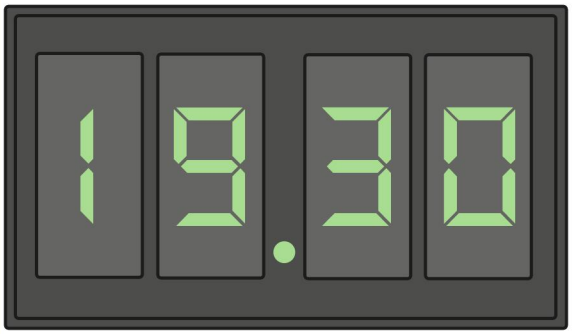
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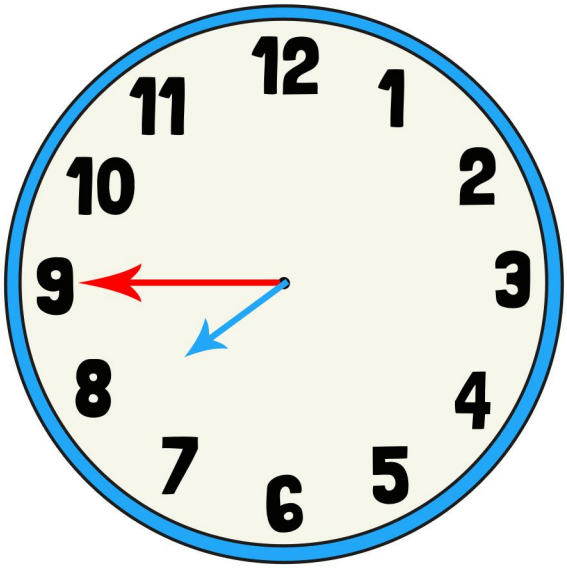
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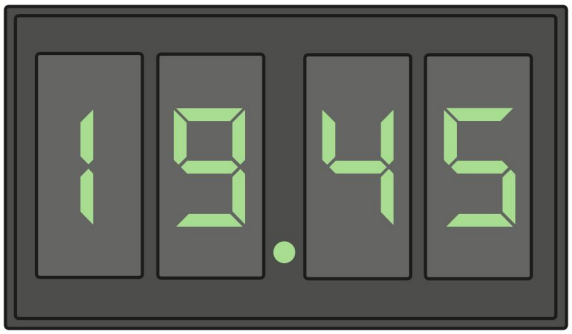
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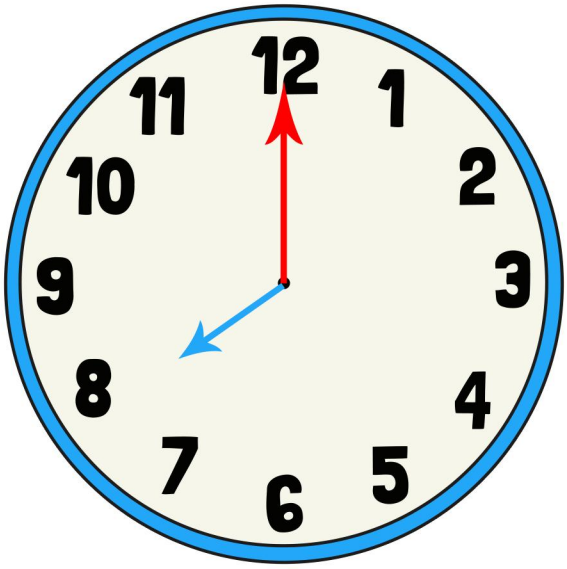
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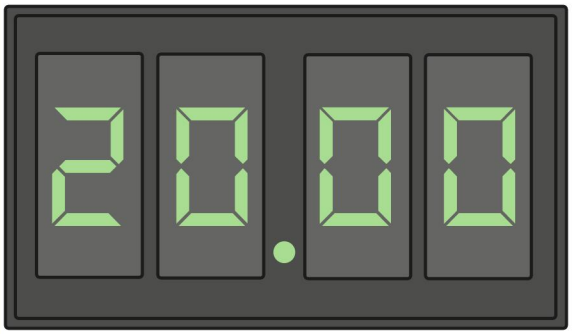
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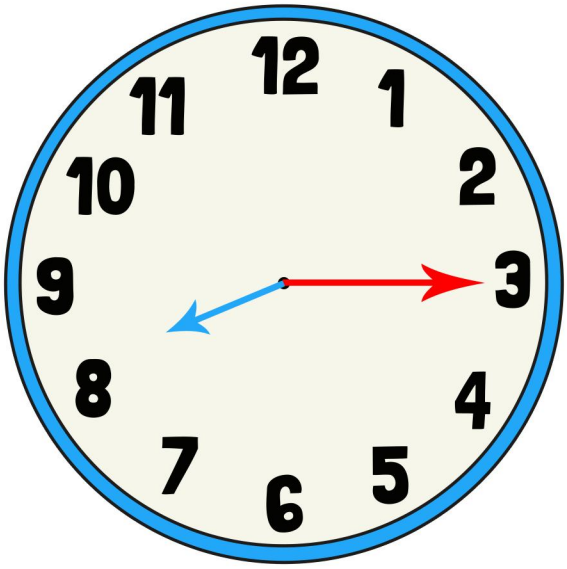
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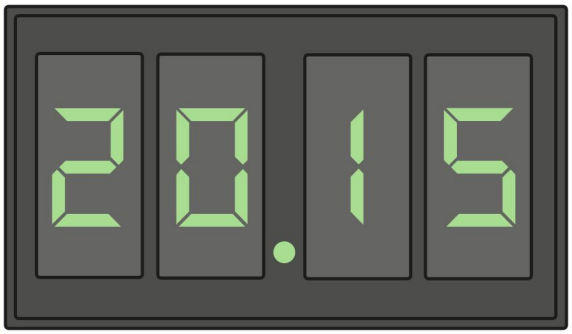
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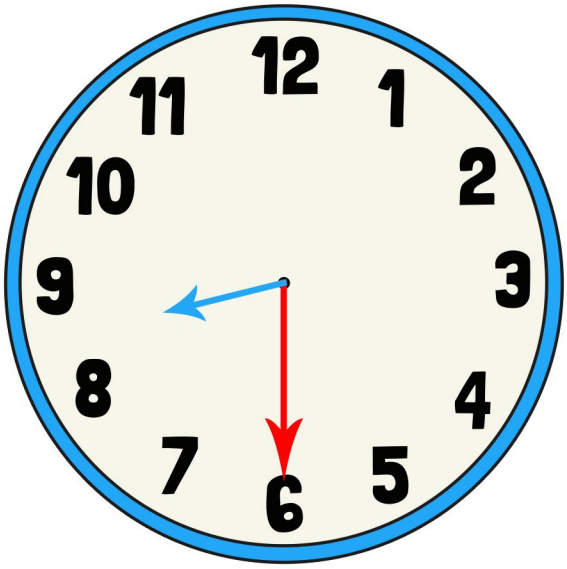
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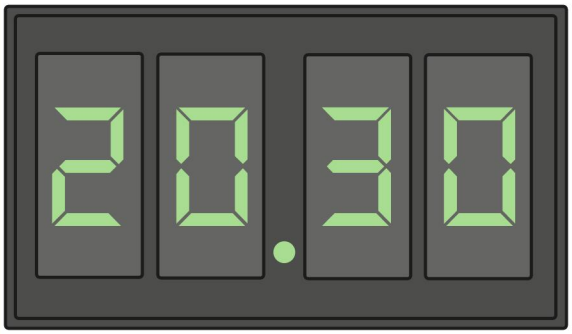
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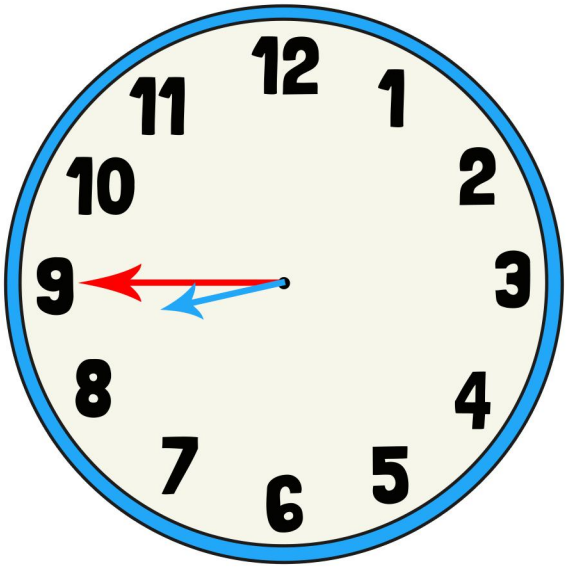
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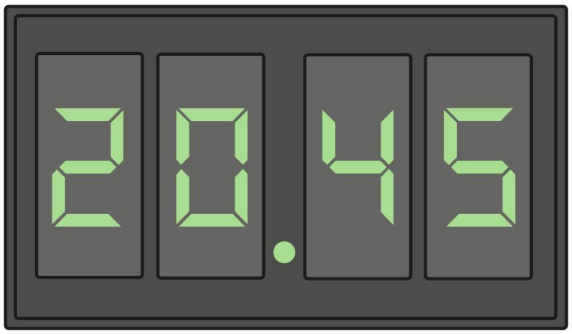
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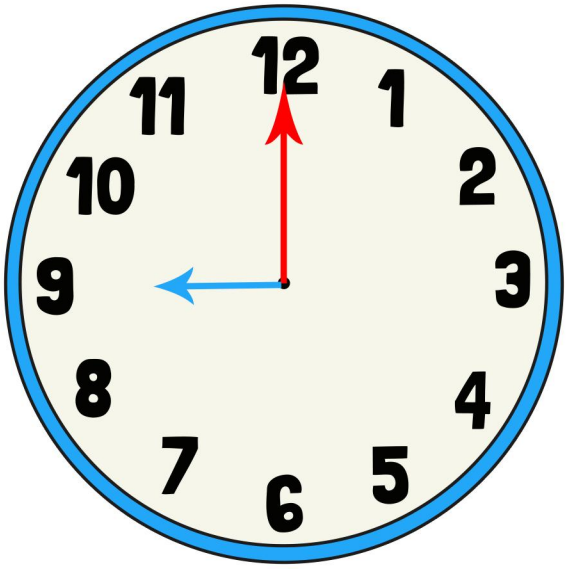
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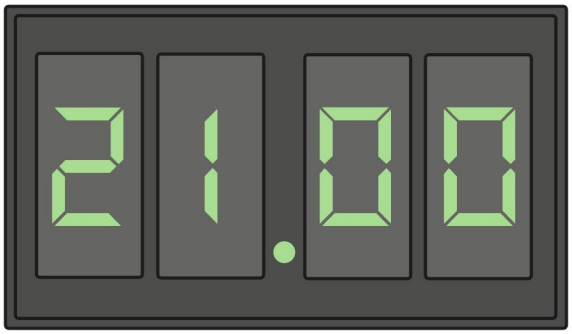
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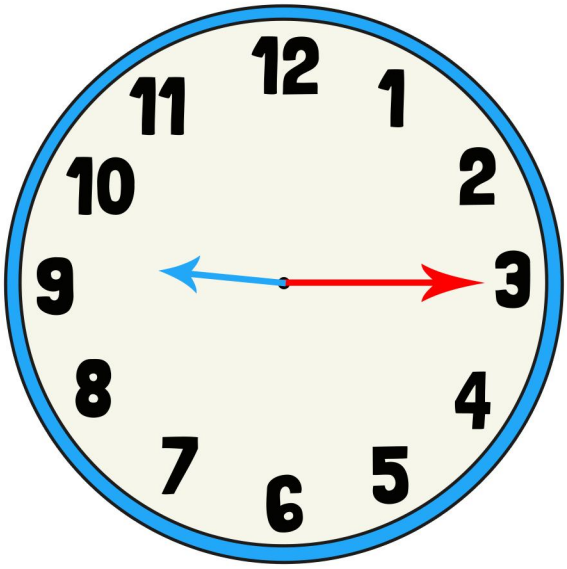
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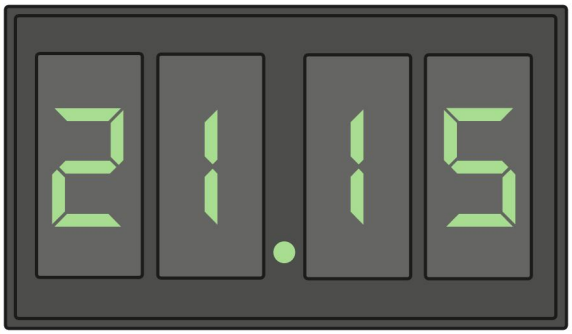
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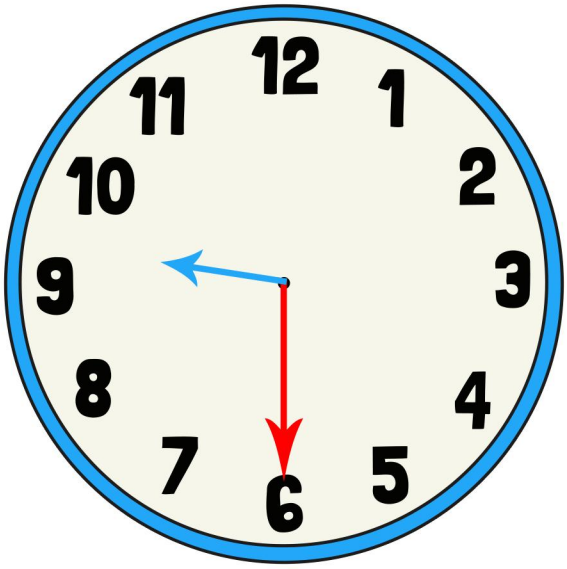
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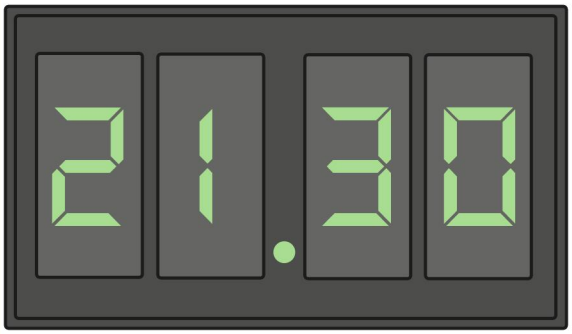
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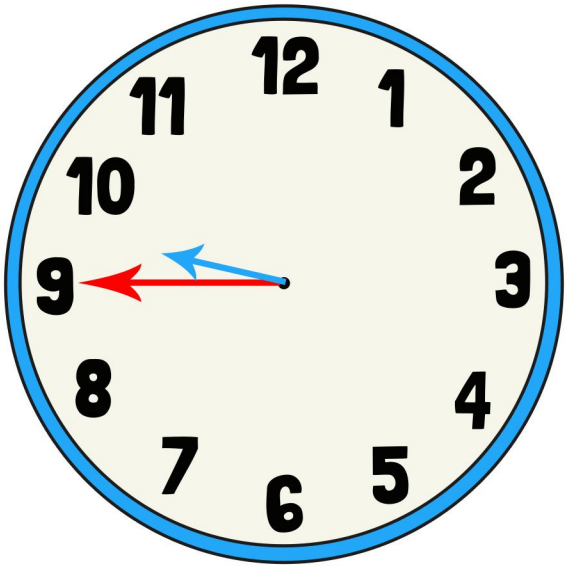
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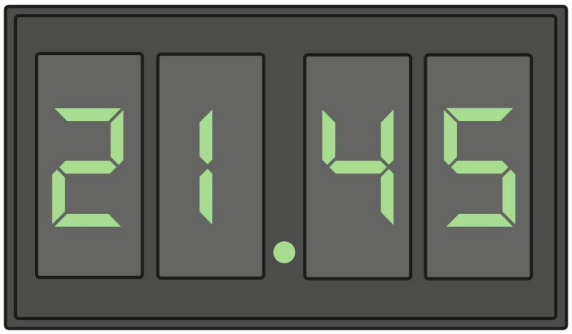
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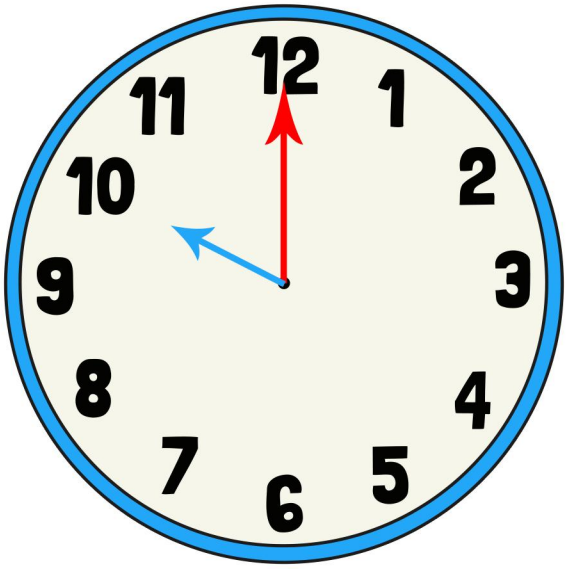
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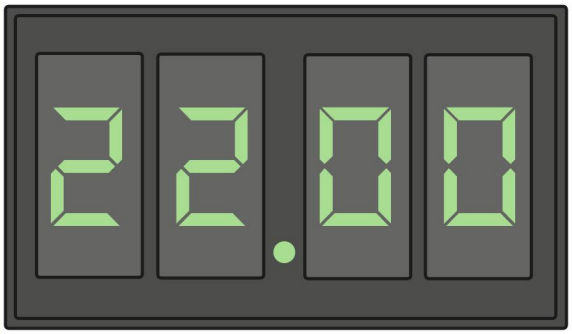
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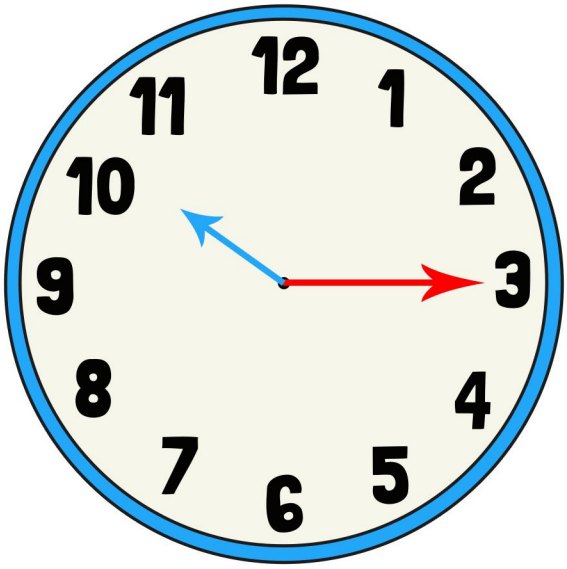
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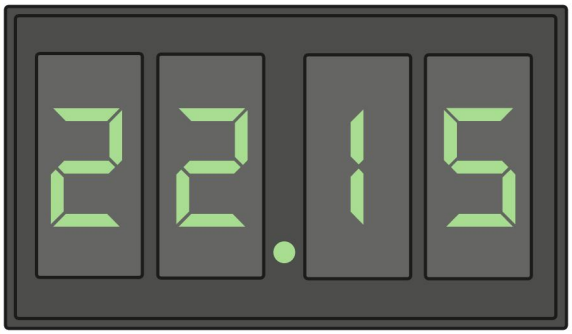
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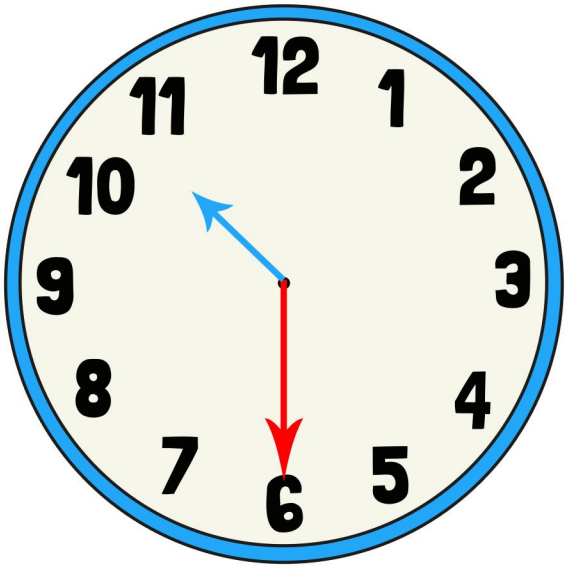
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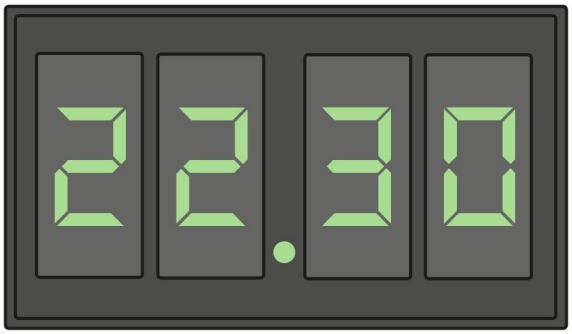
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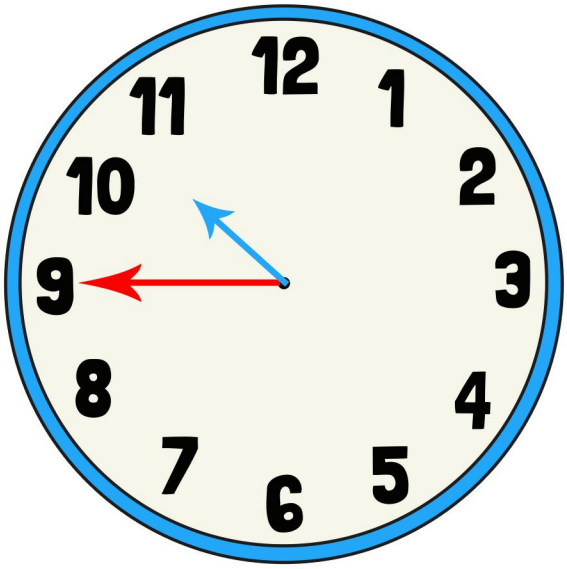
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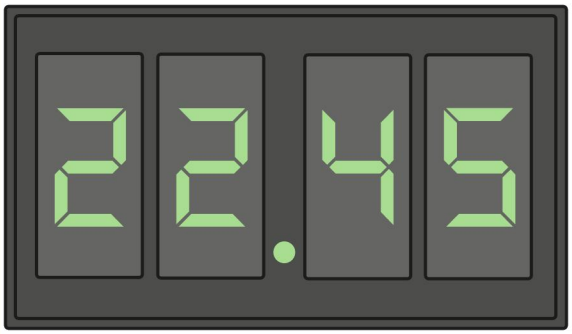
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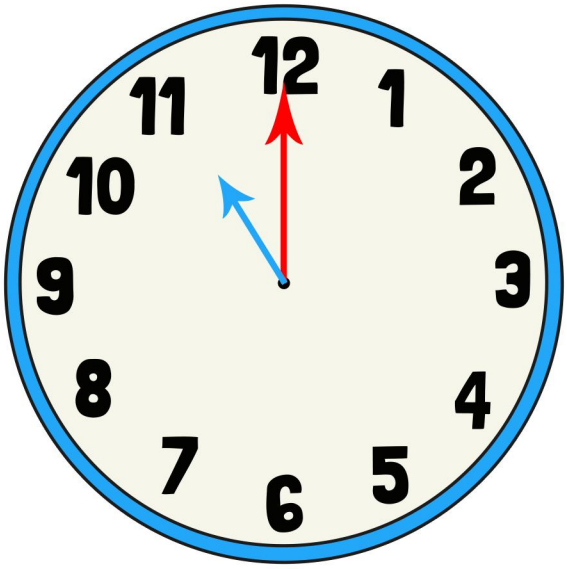
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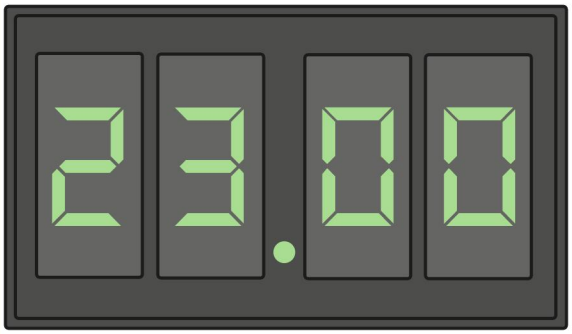
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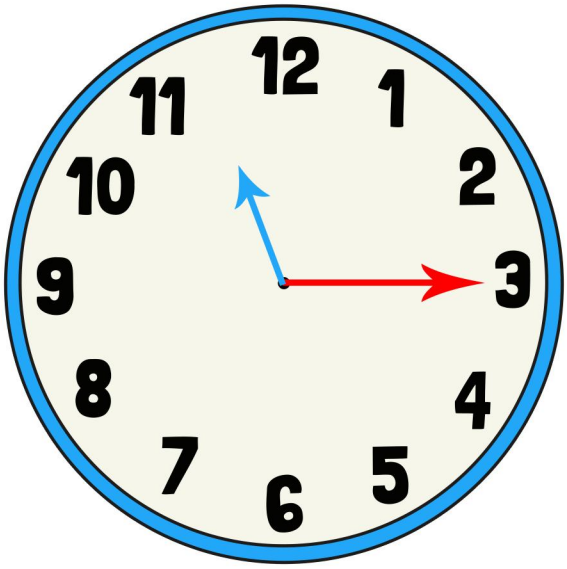
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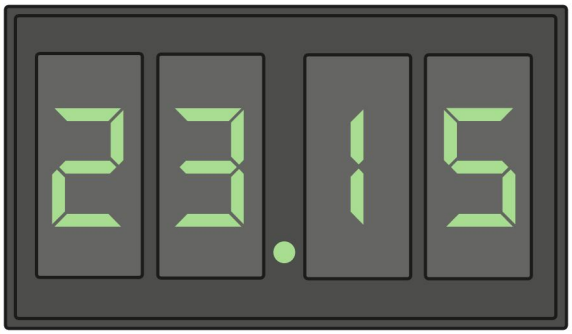
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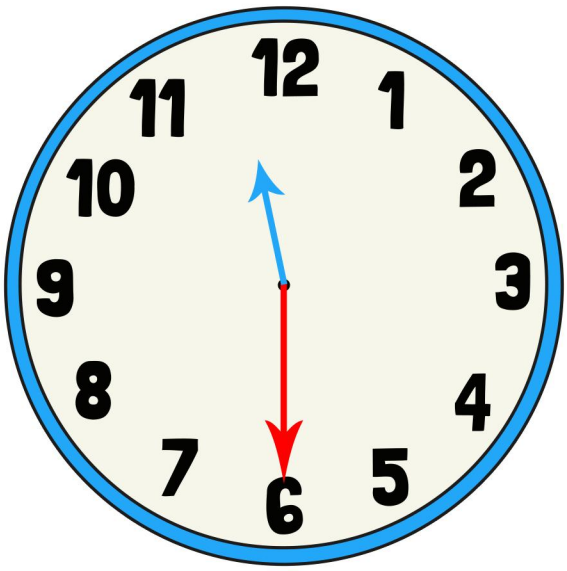
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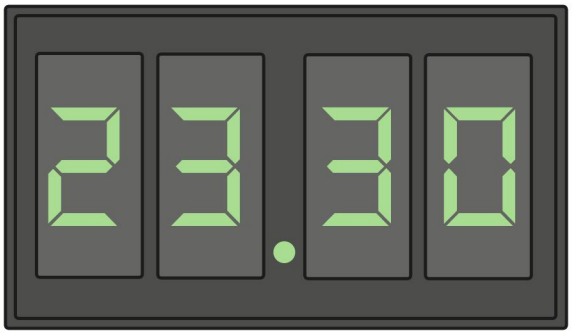
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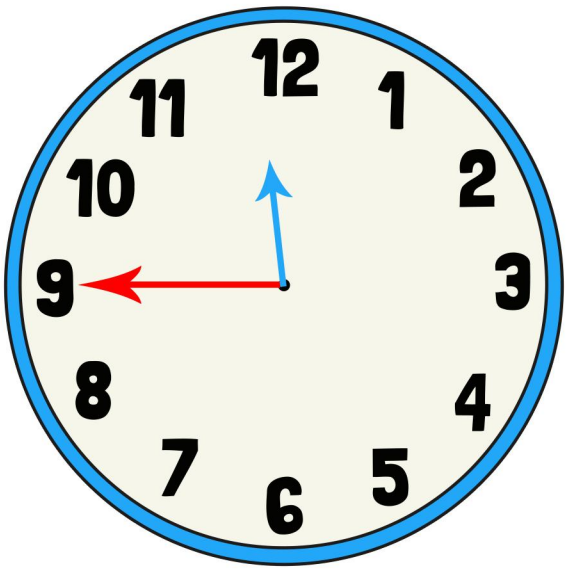
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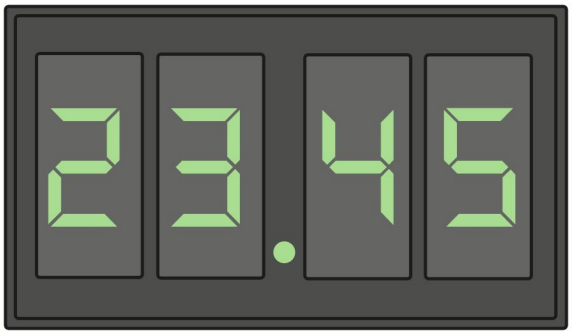
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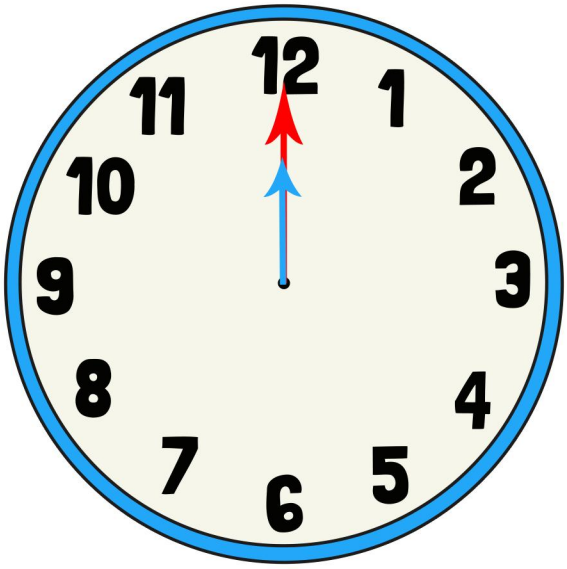
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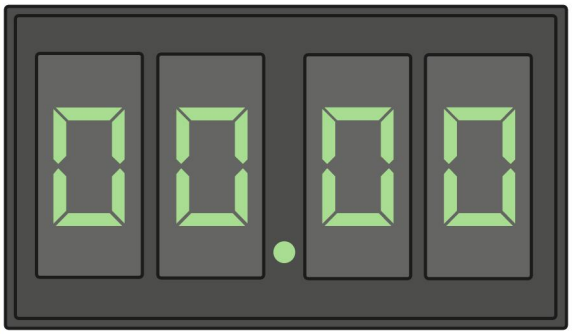
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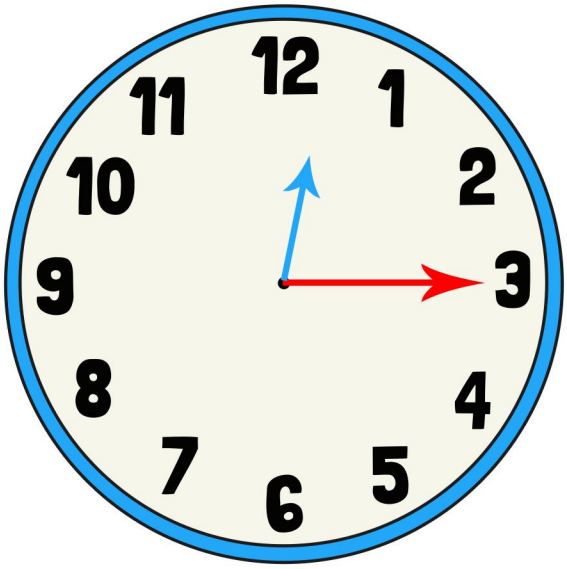
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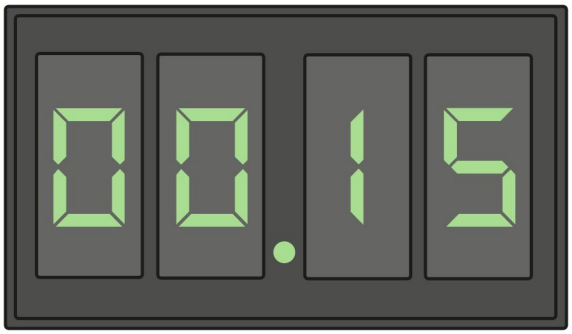
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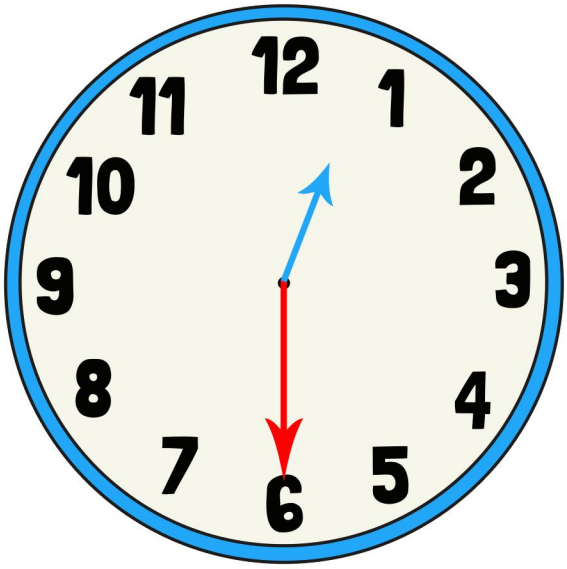
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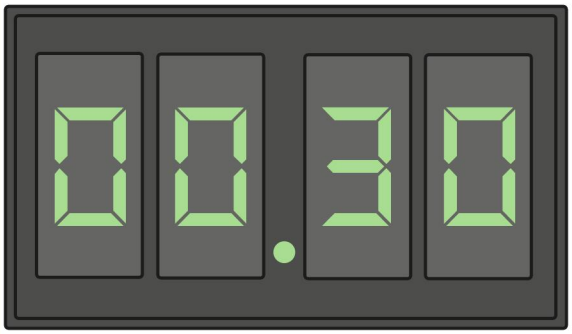
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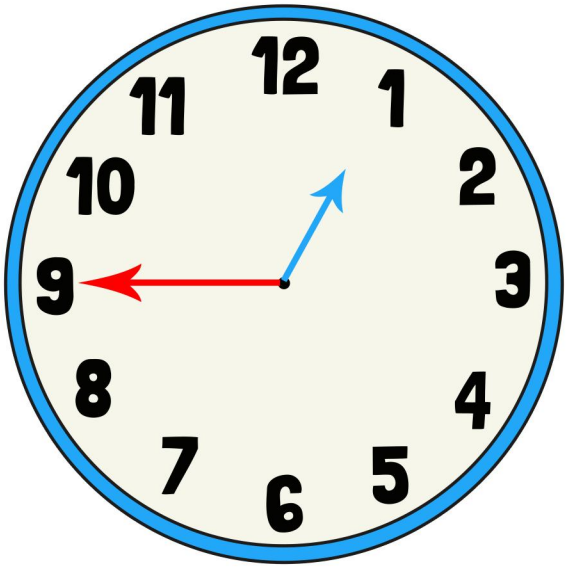
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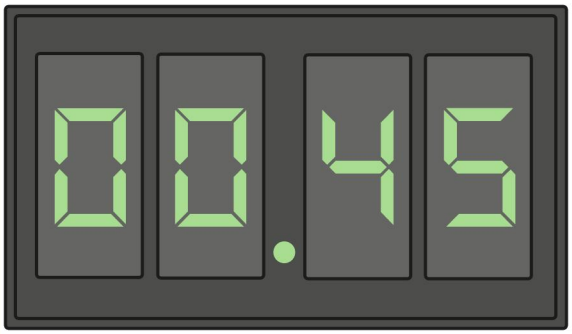
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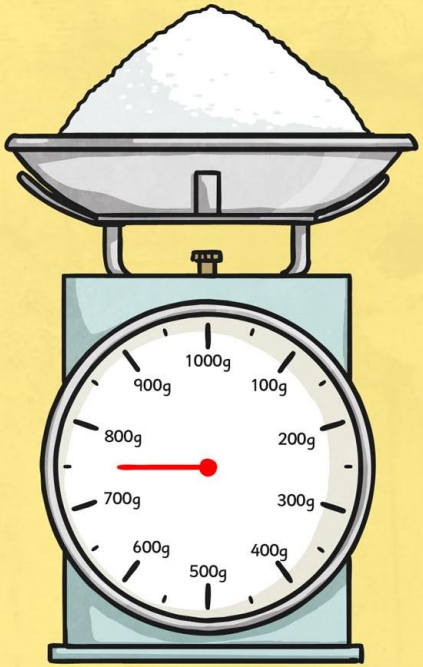
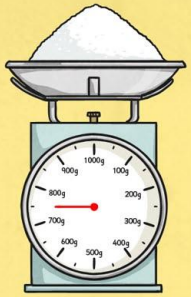
Converting Metric Measures



Metric Measurements

kilo	thousand	one thousand times bigger (than gram/metre/litre)
gram / metre / litre		
centi	hundredth	one hundred times smaller (than gram/metre/litre)
milli	thousandth	one thousand times smaller (than gram/metre/litre)

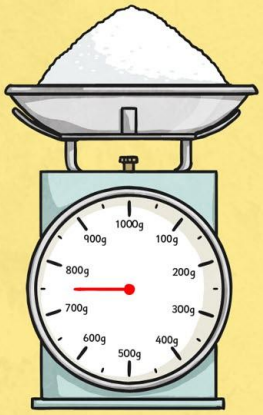


Metric Measurements

ten
times bigger

milli centi gram metre litre kilo

ten
times smaller



Metric Measurements

one hundred
times bigger

milli | centi | gram
metre
litre | kilo

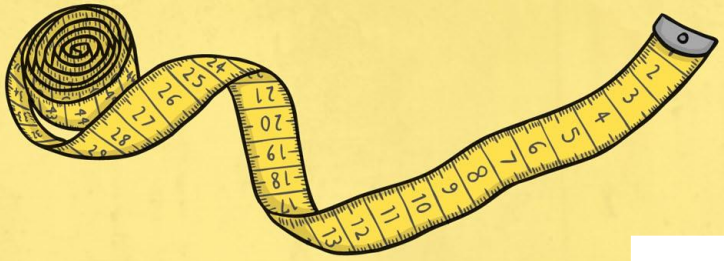
one hundred
times smaller

Metric Measurements

one thousand
times bigger

milli centi gram metre litre kilo

one thousand
times smaller



Metric Measurements

one thousand times bigger

milli | centi | gram metre litre | kilo

one thousand times smaller

Metric Measurements

one thousand times bigger

ten times bigger

one hundred times bigger

one thousand times bigger

milli

centi

gram
metre
litre

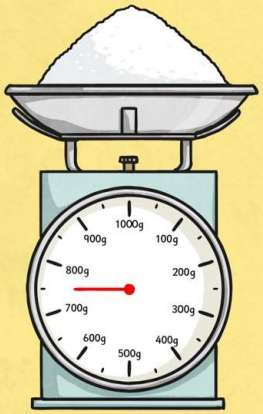
kilo

ten times smaller

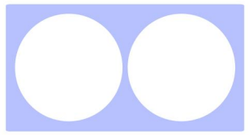
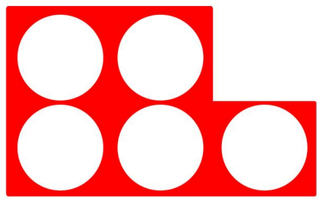
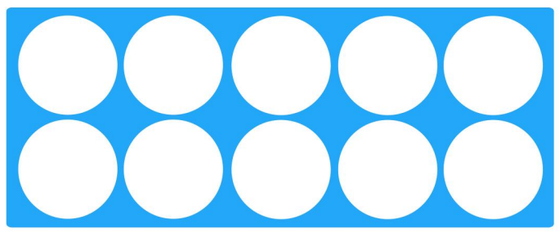
one hundred times smaller

one thousand times smaller

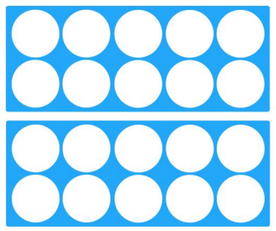
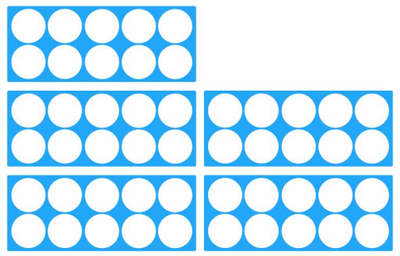
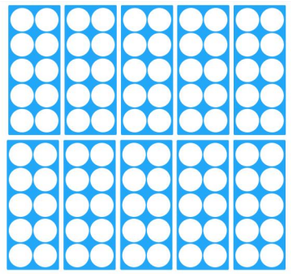
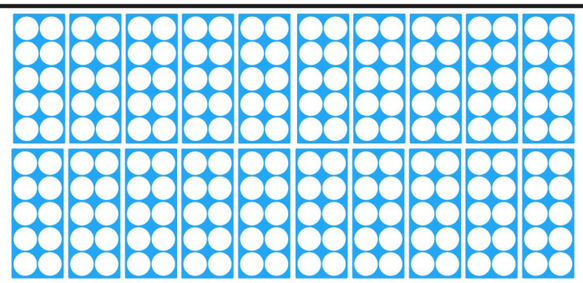
one thousand times smaller

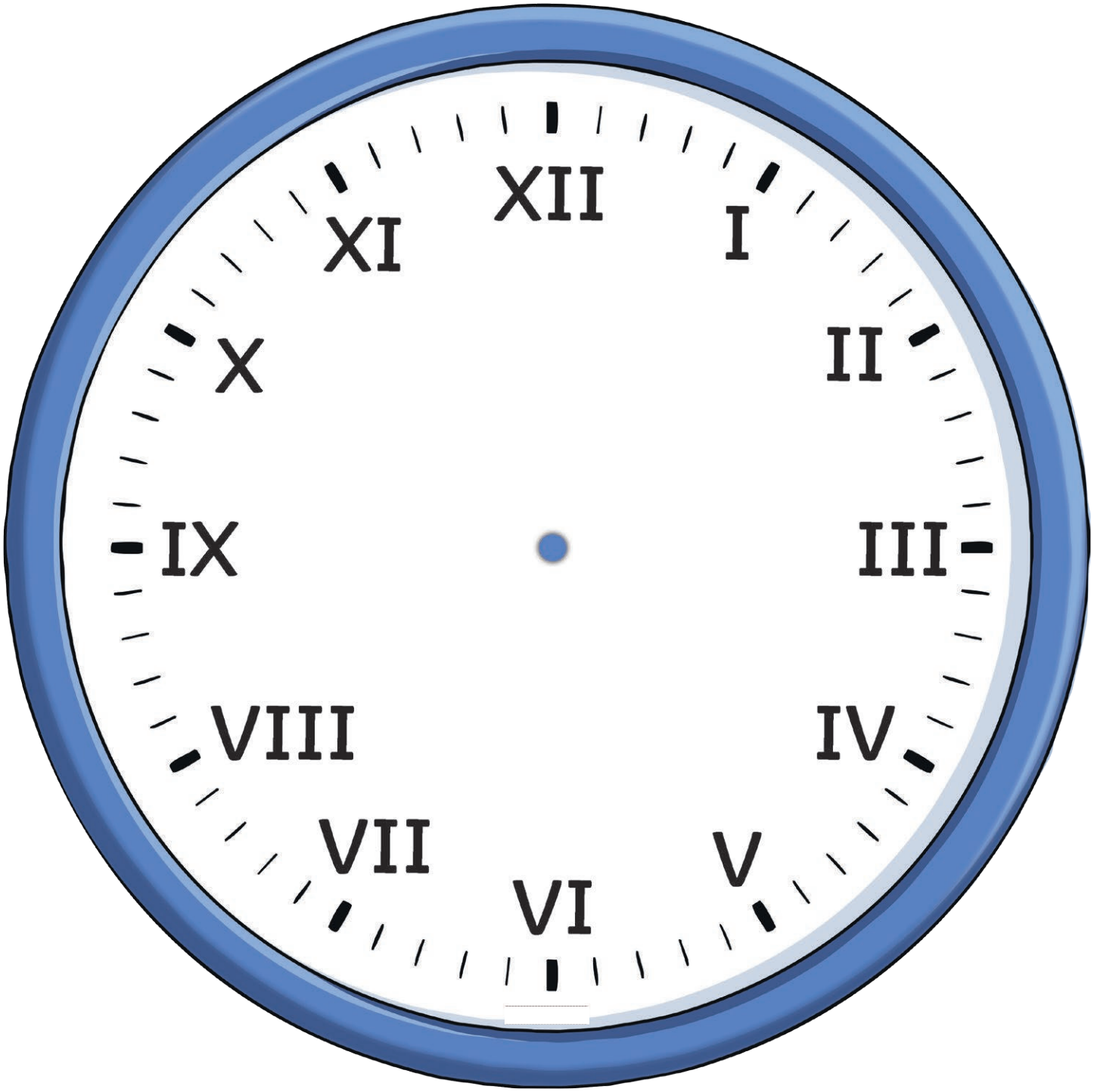


How Do We Count Coins?

		1p
		2p
		5p
		10p

How Do We Count Coins?

		20p
		50p
		£1
		£2


XII
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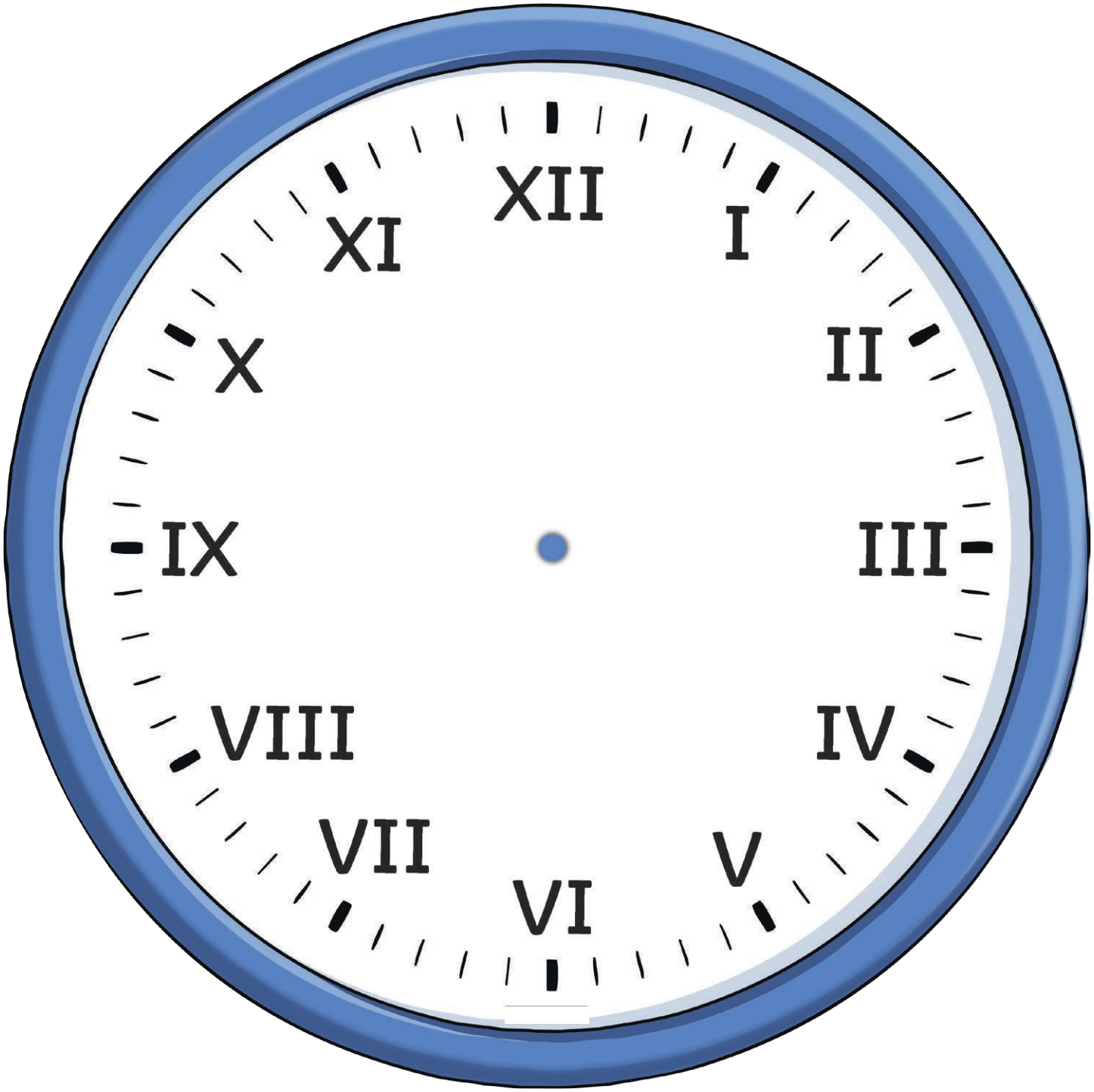
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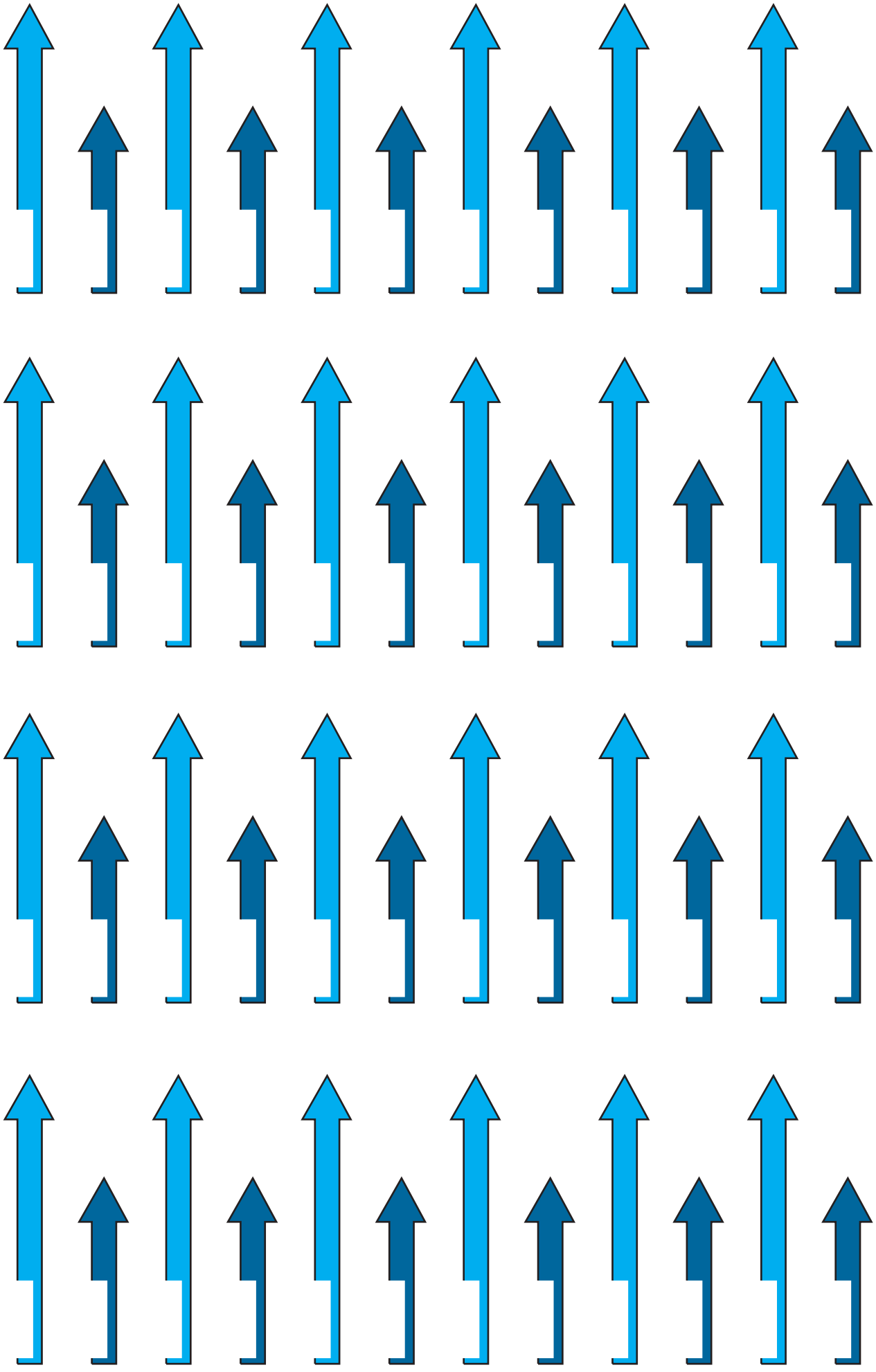
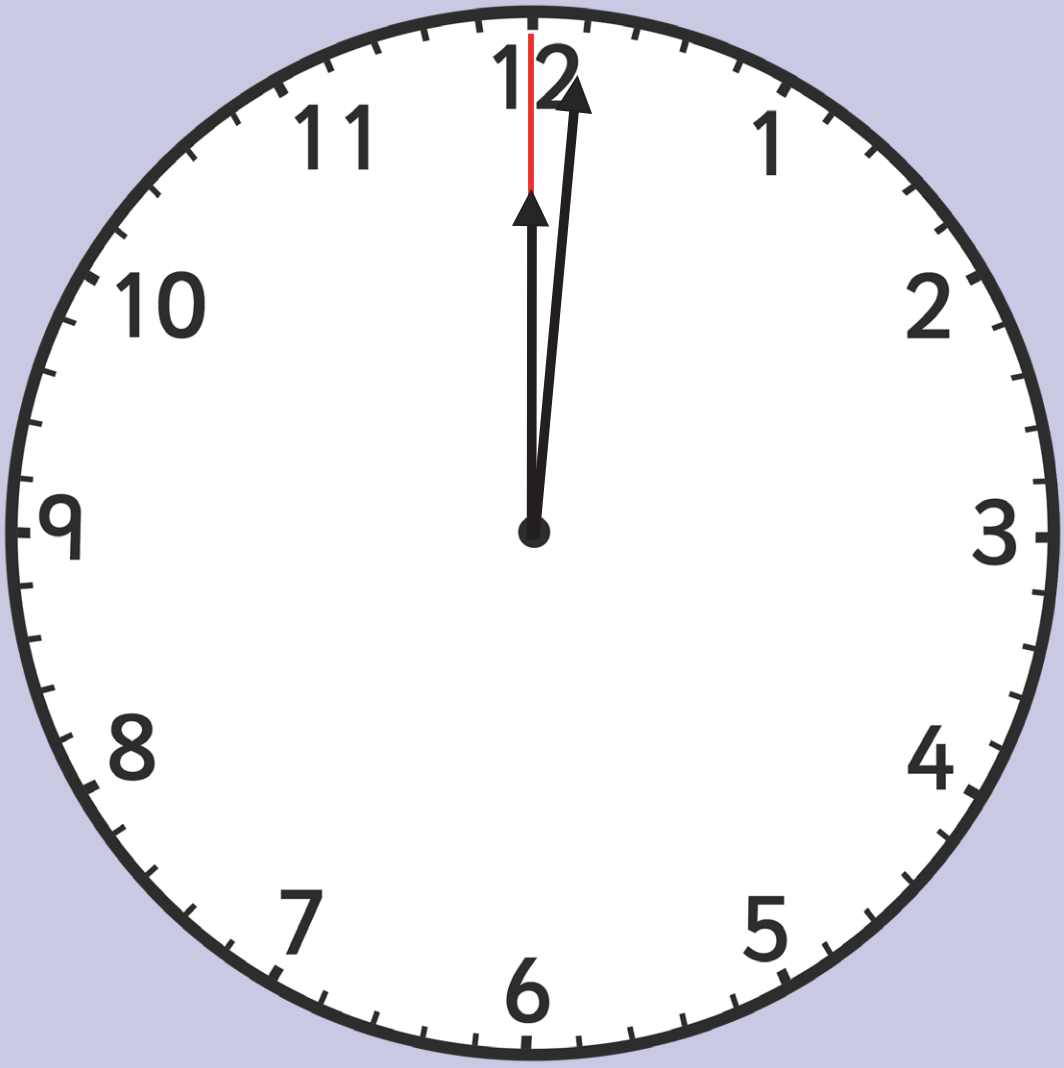


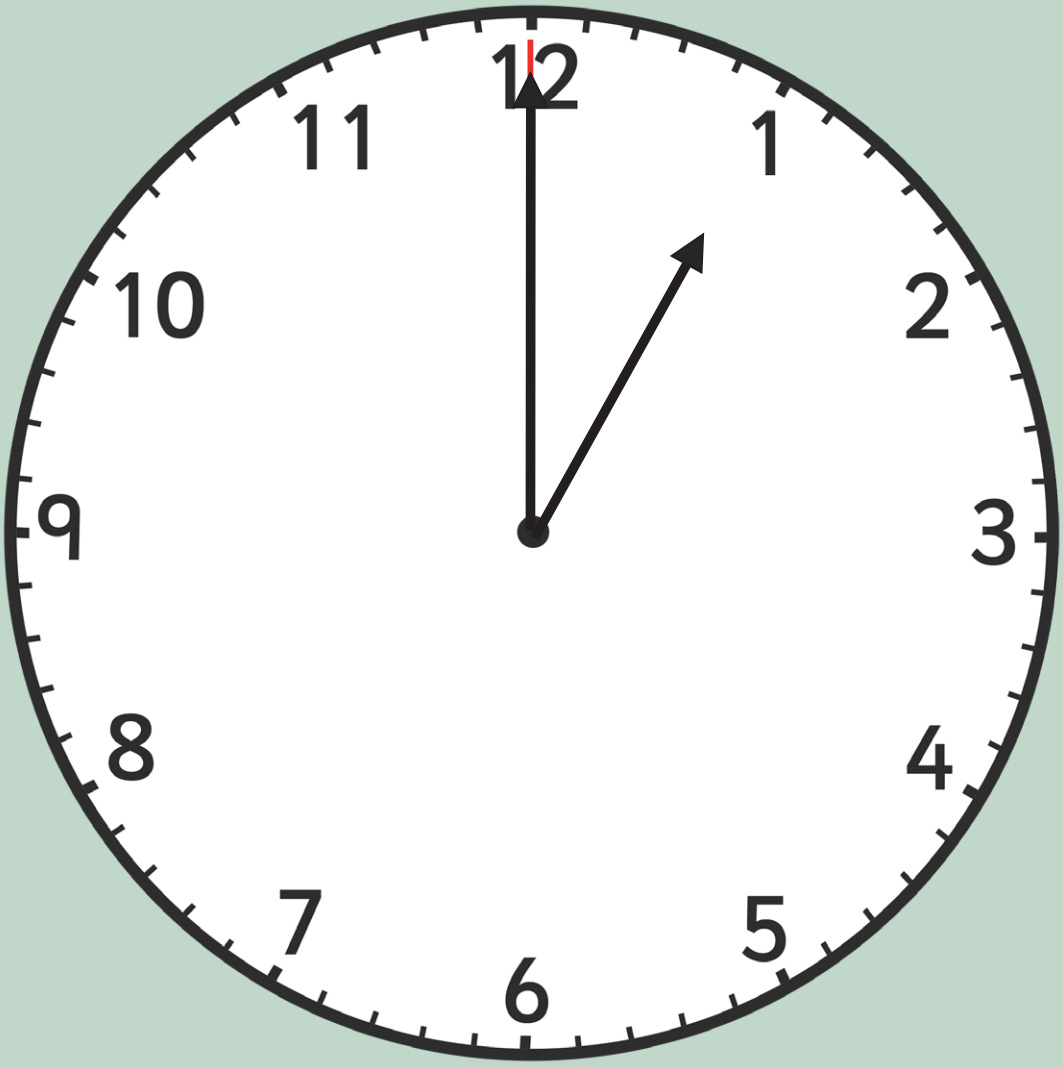
Minute

1 minute = 60 seconds



Hour

1 hour = 60 minutes

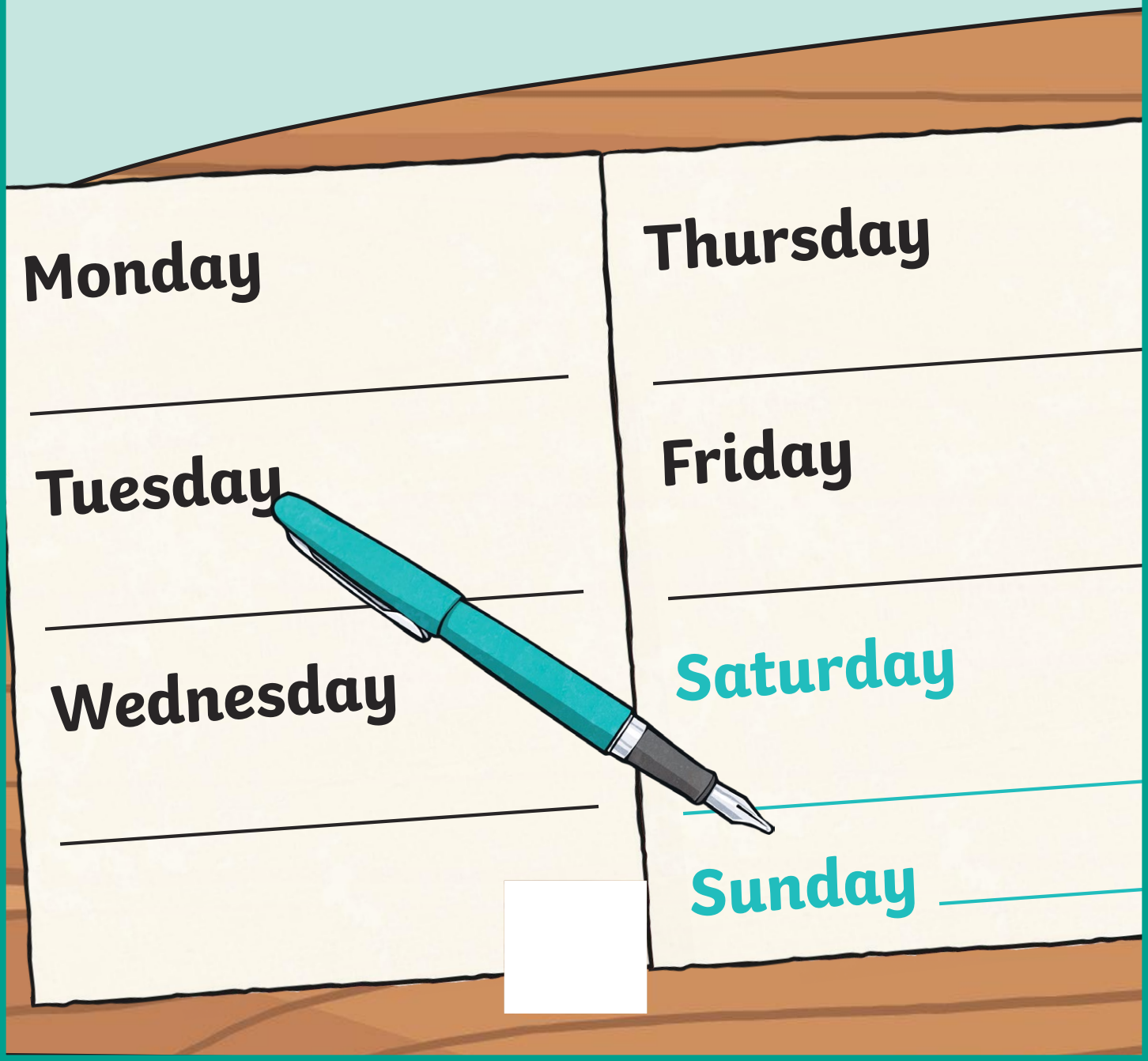


Day

1 day = 24 hours

Week

1 week = 7 days



Fortnight

1 fortnight = 2 weeks

Month

January = 31 days

February = 28 days (29 on a leap year)

March = 31 days

April = 30 days

May = 31 days

June = 30 days

July = 31 days

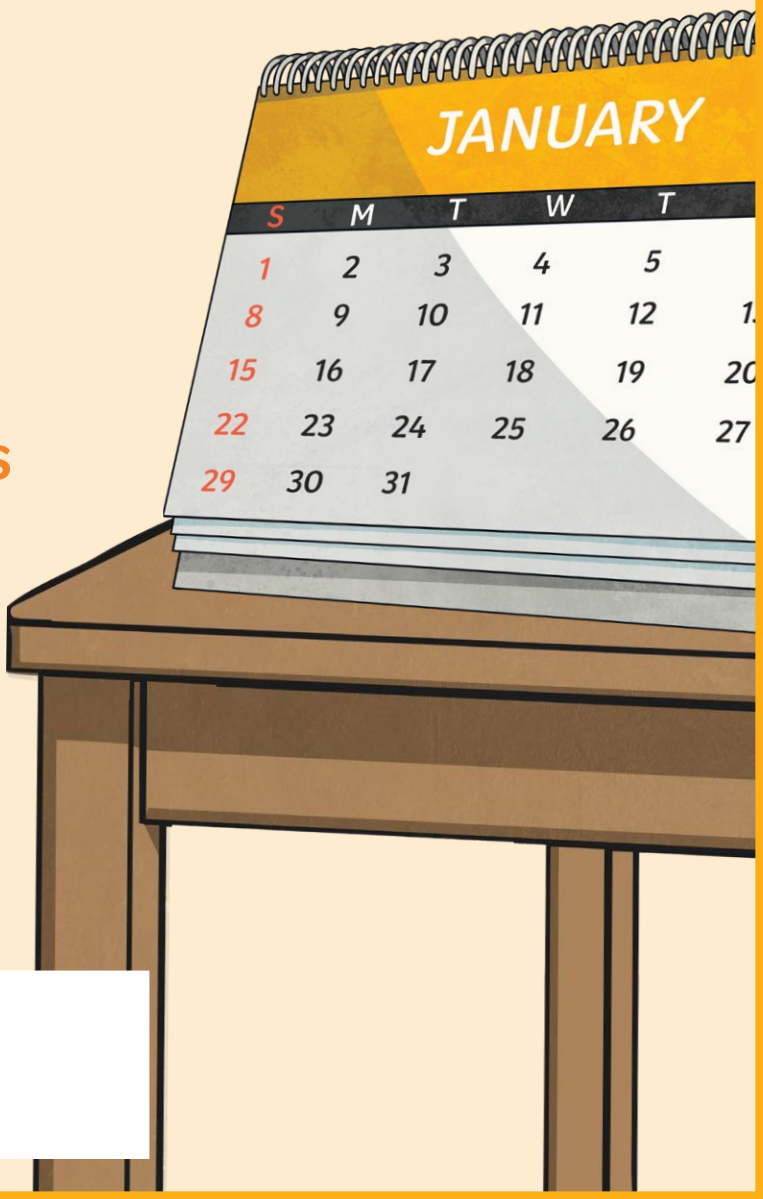
August = 31 days

September = 30 days

October = 31 days

November = 30 days

December = 31 days



Year

1 year =

12 months =

52 weeks =

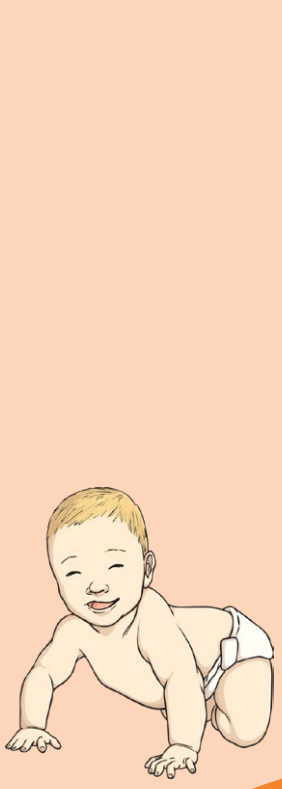
365 days

Leap Year

1 leap year = 366 days

Decade

1 decade = 10 years



2000 2010

Century

1 century = 100 years

1900 2000

Millennium

1 millenium = 1000 years

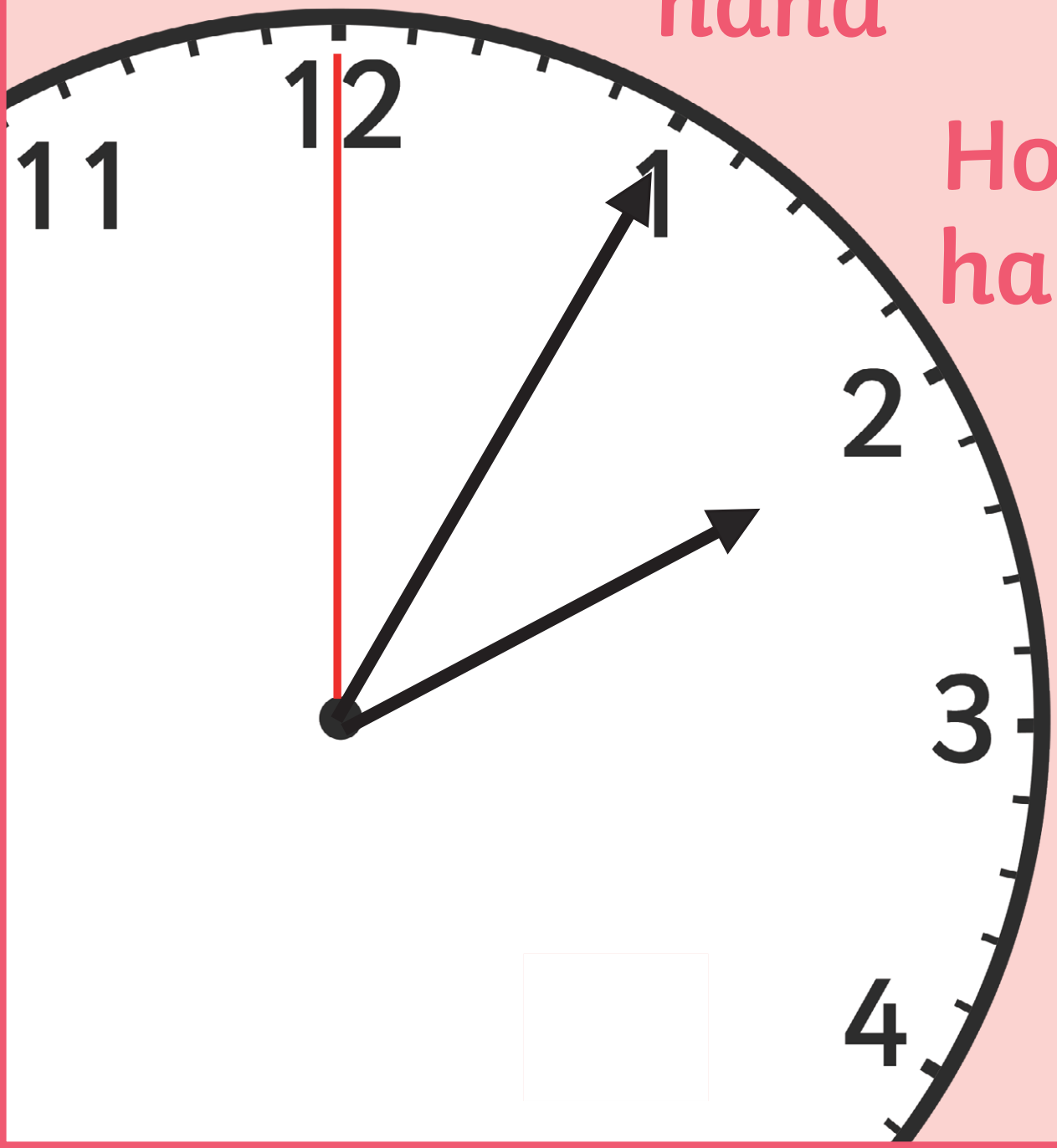
1000 2000

Clock Hands

Second hand

Minute hand

Hour hand

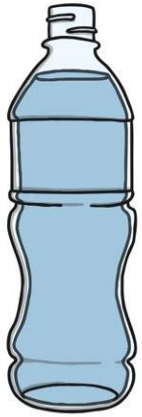


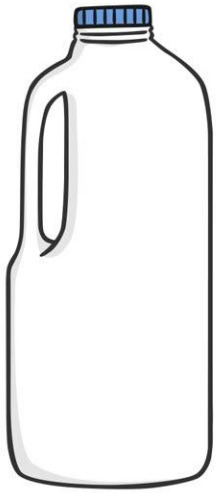
Measurement conversions

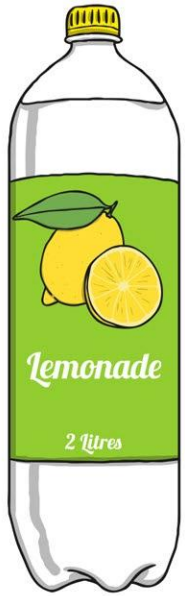
Capacity

1 litre = 1000 millilitres

1 centilitre = 10 millilitres







l

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ml

Measurement conversions

Currency

1 pound = 100 pence

£

p

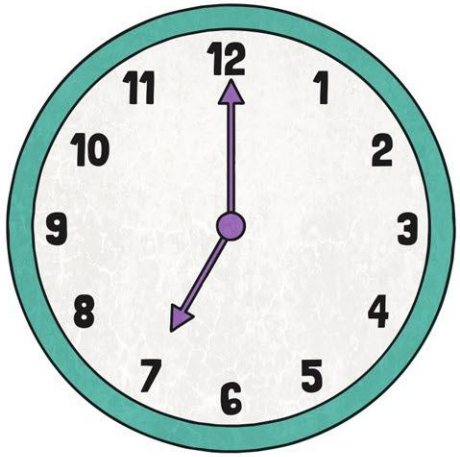
Measurement conversions

Time

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds



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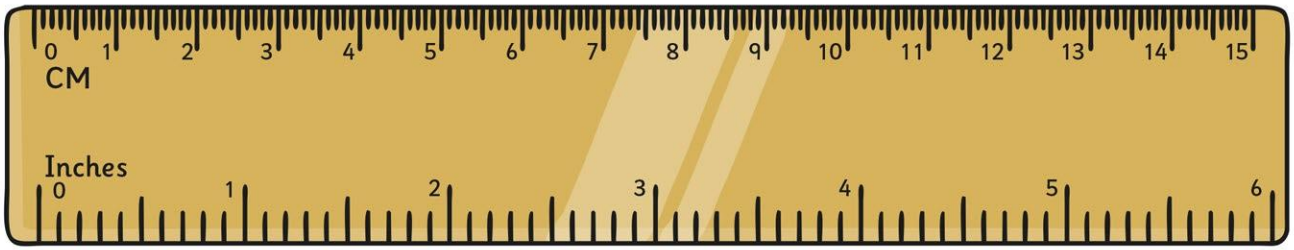
Measurement conversions

Length

1 kilometre = 1000 metres

1 metre = 100 centimetres

1 centimetre = 10 millimetres



km

m

cm

mm

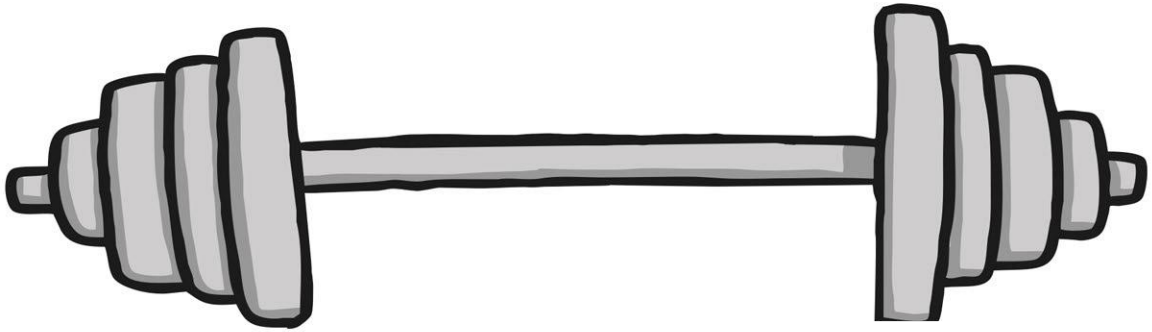
Measurement conversions

Weight

1 tonne = 1000 kilograms

1 kilogram = 1000 grams

1 gram = 1000 milligrams



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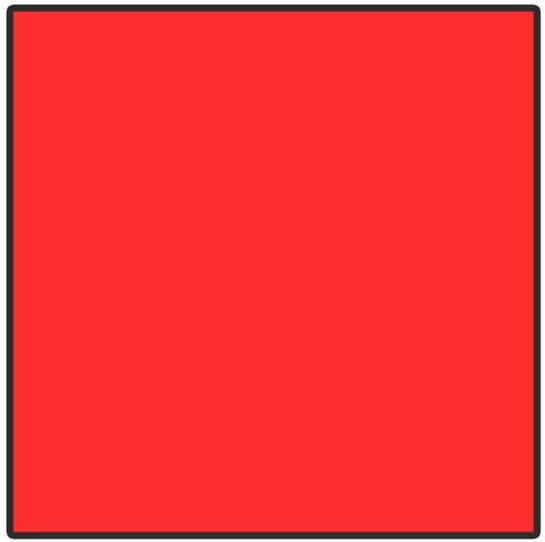
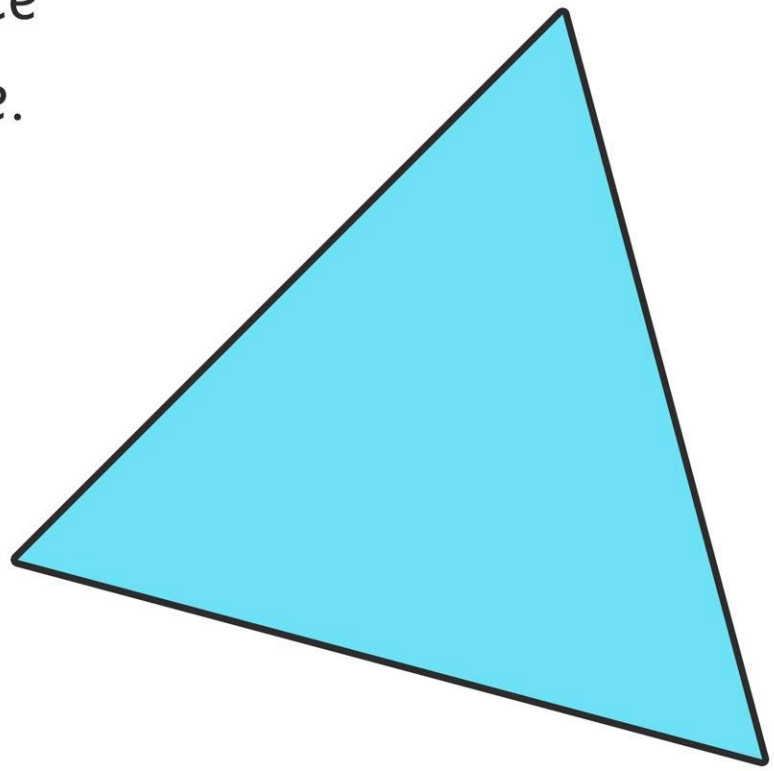
mg

Finding the **Perimeter**

The **perimeter** is the total distance around the outside of a 2D shape.



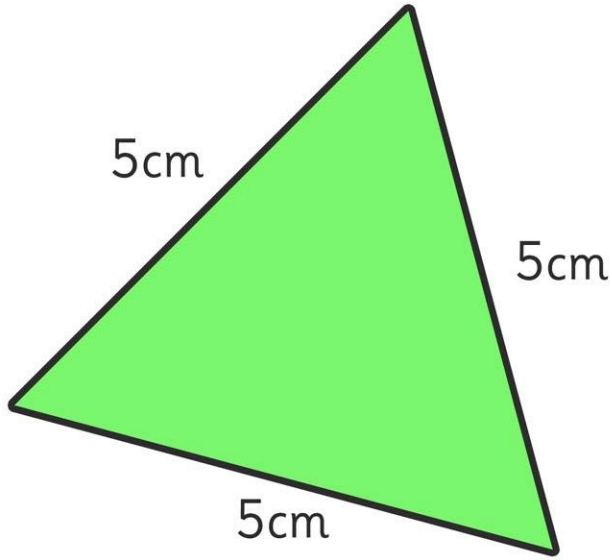


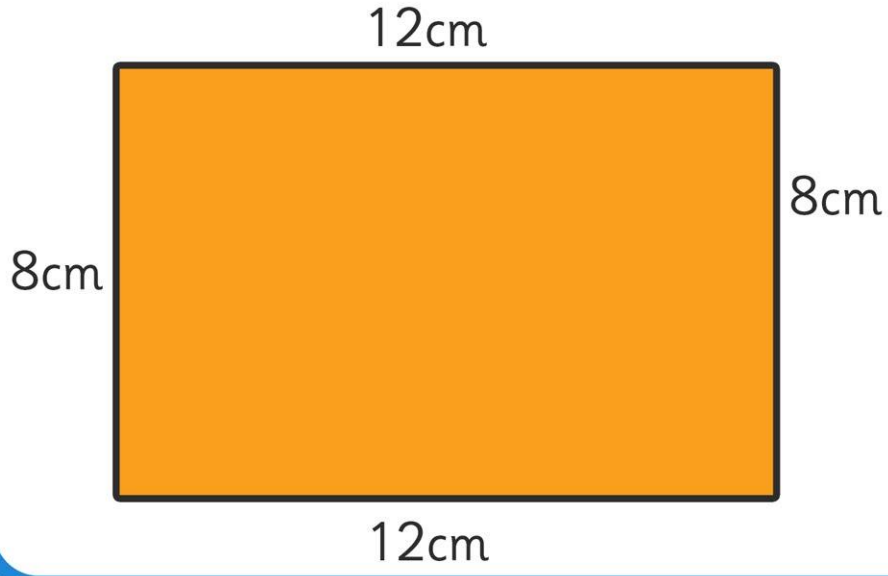
To find the perimeter of any shape with straight sides, simply **add together the length of all the sides.**

Finding the **Perimeter**

The **perimeter** of this triangle is:

5cm + 5cm + 5cm = **15cm**





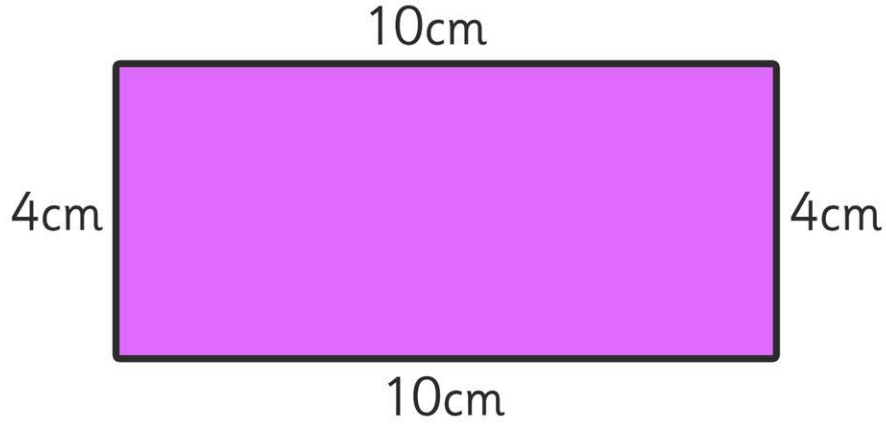
The **perimeter** of this rectangle is:

12cm + 12cm + 8cm + 8cm = **40cm**

Finding the **Perimeter**: Rectangles and Parallelograms

The **perimeter**:

10cm + 10cm + 4cm + 4cm = **28cm**



Rectangles and parallelograms have two pairs of equal parallel sides, so you could also work it out like this:

multiply 10cm by 2 and 4cm by 2 and add the totals together:

10 × 2 = **20** and 4 × 2 = **8** so 20 + 8 = **28cm**

or

add 10cm and 4cm then multiply by 2:

10 + 4 = 14 → 14 × 2 = **28cm**

Finding the **Area**

The **area** is the total amount of surface a 2D shape covers.

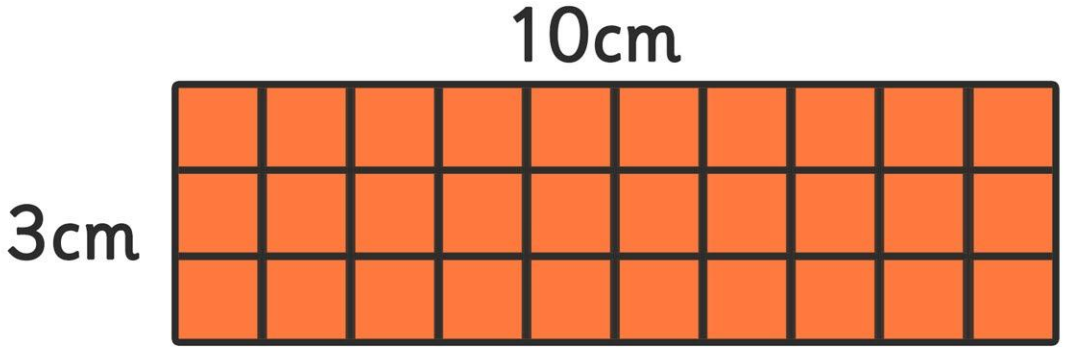
Area is measured in square units:

squared centimetres (**cm²**)

squared metres (**m²**)

squared kilometres (**km²**)

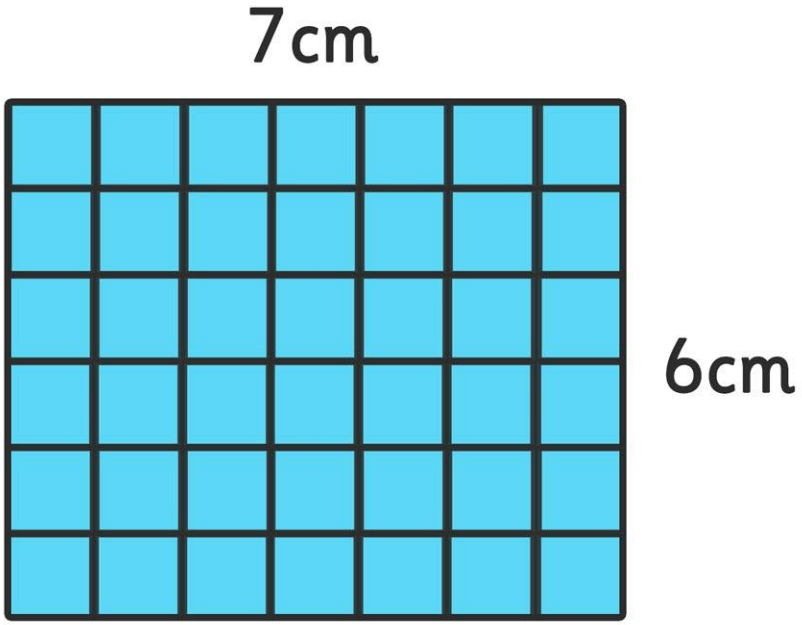
Finding the Area: Rectangle



The area:

10cm × 3cm

= 30cm²

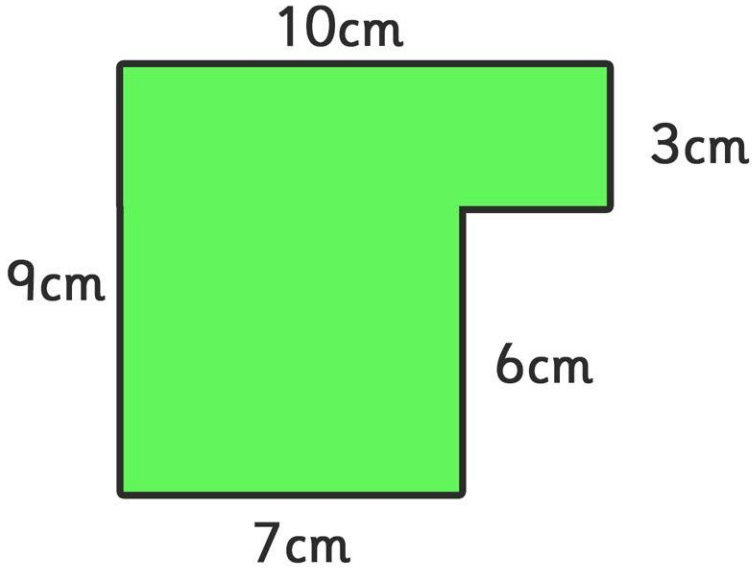


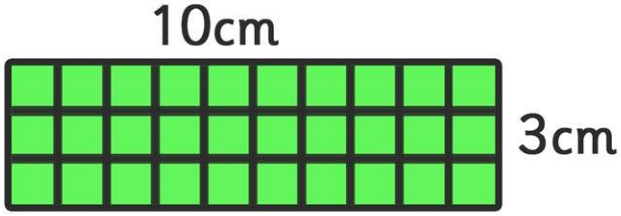
The area:

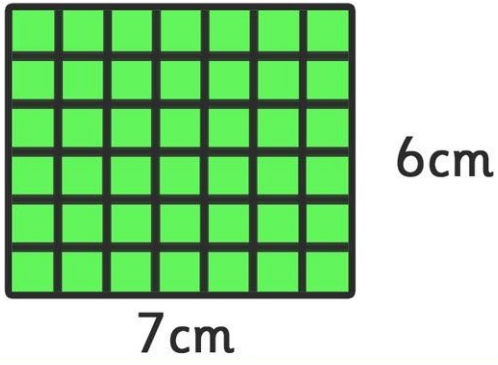
7cm × 6cm

= 42cm²

Finding the **Area**







You can calculate the area of shapes made up of rectangles by breaking them down into individual rectangles.

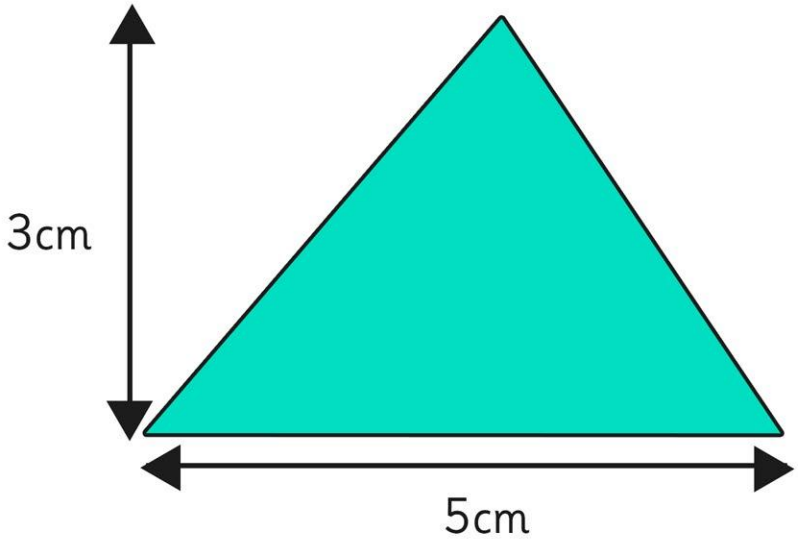
The area:

$10\text{cm} \times 3\text{cm} = \mathbf{30cm^2}$

$6\text{cm} \times 7\text{cm} = \mathbf{42cm^2}$

$30\text{cm}^2 + 42\text{cm}^2 = \mathbf{72cm^2}$

Finding the **Area** of a Triangle



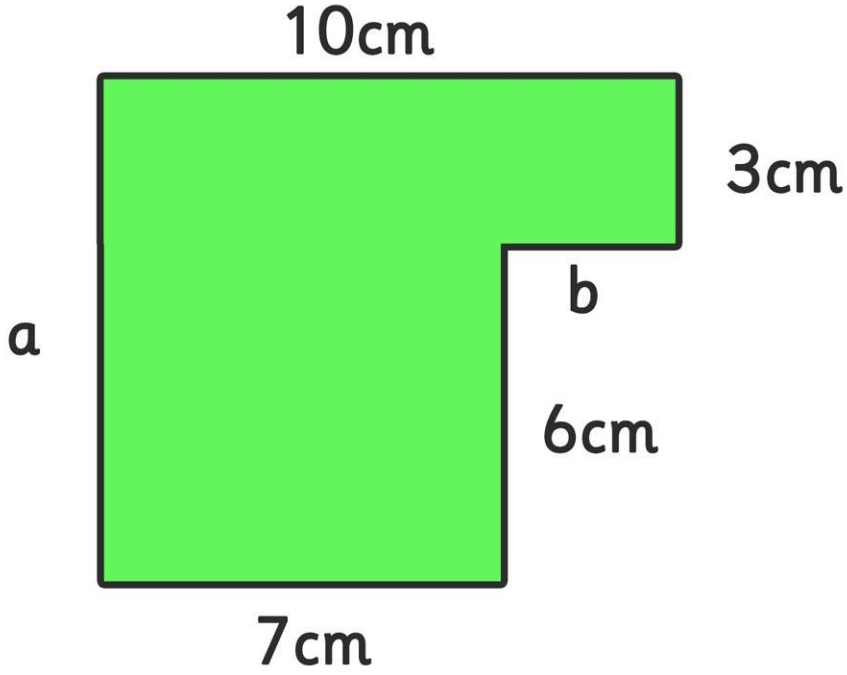
To find the area
of a triangle:
multiply the base × the height
and divide the answer by 2

$5cm \times 3cm = 15cm^2$

$15cm \div 2 = 7.5cm^2$

$area = 7.5cm^2$

Finding the **Perimeter** of a Rectilinear Shape



You can calculate the perimeter of a rectilinear shape by adding together the length of each side.

You may need to calculate the length of any sides not given.

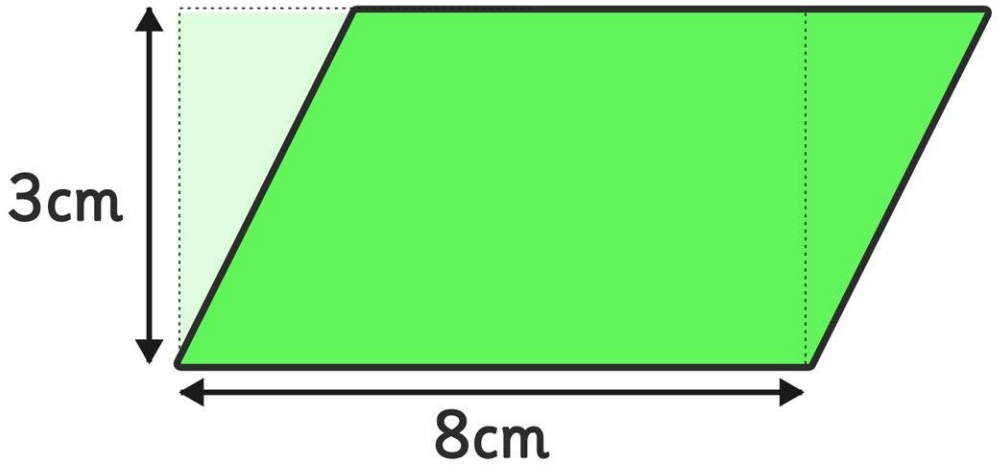
$a = 6cm + 3cm = 9cm$

$b = 10cm - 7cm = 3cm$

The perimeter:

$10cm + 3cm + 3cm + 6cm + 7cm + 9cm = 38cm$

Finding the **Area** of a Parallelogram



To find the area of a parallelogram:

multiply the base by the height

$8\text{cm} \times 3\text{cm} = 24\text{cm}^2$

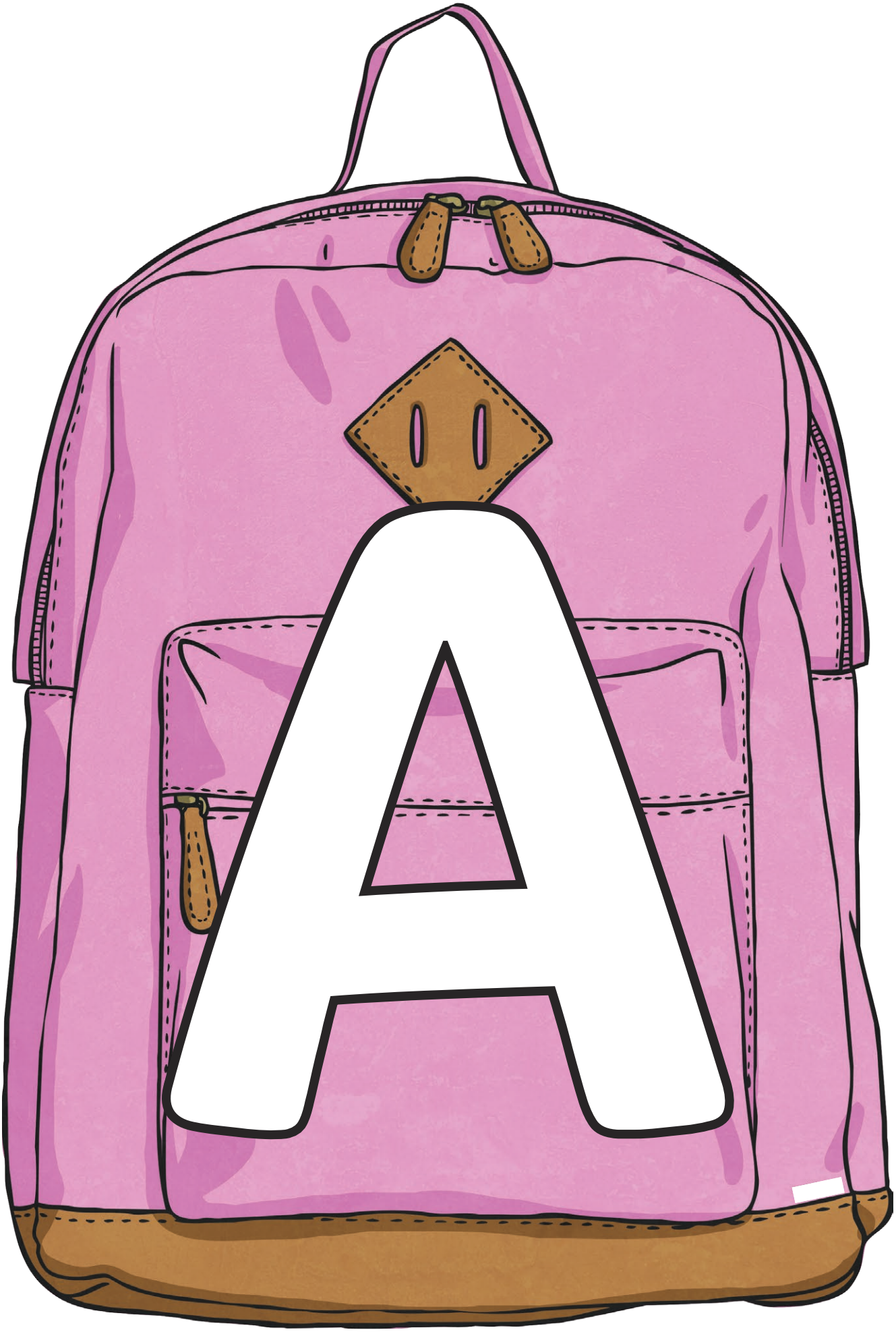
See how the parellelogram can be changed into a rectangle.


R


U


C


S


A


C

Read

Read the question.

What is the important information?

Understand

Understand the question.

What do you need to find out?

Choose

Choose the correct method of calculation and operation(s).

Solve

Solve the problem.
Make sure you follow
the steps.

Answer

Answer the question.

What were you meant to find out?

Check

Check your answer.

Use the inverse to check your working out.

12 hour time	24 hour time
12am (midnight)	00:00
1am	01:00
2am	02:00
3am	03:00
4am	04:00
5am	05:00
6am	06:00
7am	07:00
8am	08:00
9am	09:00
10am	10:00
11am	11:00
12pm (noon)	12:00
1pm	13:00
2pm	14:00
3pm	15:00
4pm	16:00
5pm	17:00
6pm	18:00
7pm	19:00
8pm	20:00
9pm	21:00
10pm	22:00
11pm	23:00

Maths Mastery

Challenge Cards

1. How many different ways can you make the total of £2.95?

You can use the same value coin more than once.

What is the least amount of coins you could use?

2. At a market stall by the seaside, Hannah can buy the following items:

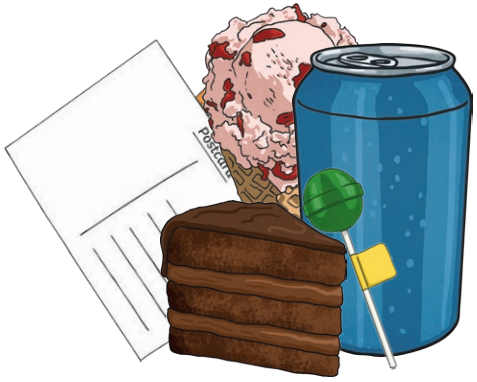
postcard 25p

lolly 35p

ice cream 75p

cake £1.20

cola 55p



Hannah has £2. She buys three items and has less than £1 in change. Which three items could she have bought?

3. Maurice the magpie has been stealing again!

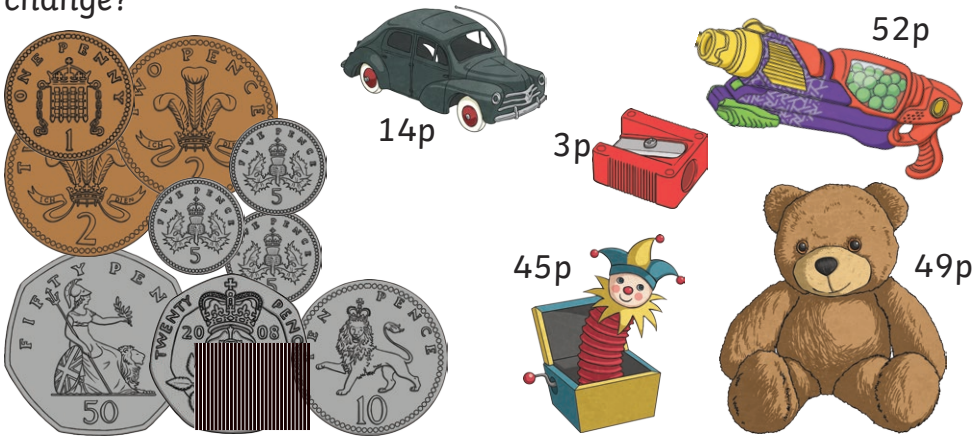
He has stolen 3 silver coins.

What different totals could the coins make?

4. Find all the different amounts you can make choosing any 3 of these coins:

5. Freddie has these coins:

Which items can Freddie pay for exactly without needing change?

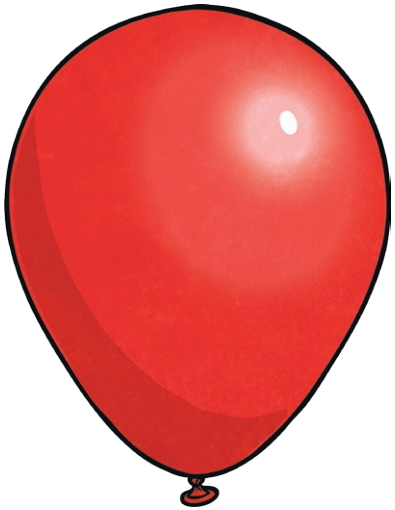


6. Ben bought a balloon.

He gave the shopkeeper six coins to pay for it.

What could Ben have paid for the balloon?

Look at your answers. Which ones are reasonable amounts to pay for a balloon?



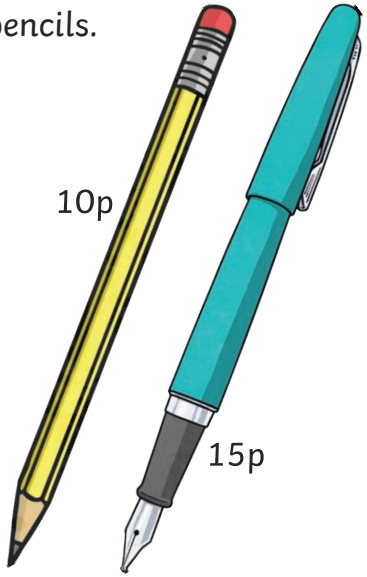
7. Imrik went to buy some pens and pencils.

He had £2.50.

He bought 4 times as many pens as pencils.

He was given 40p change.

How many pens and pencils did he buy?



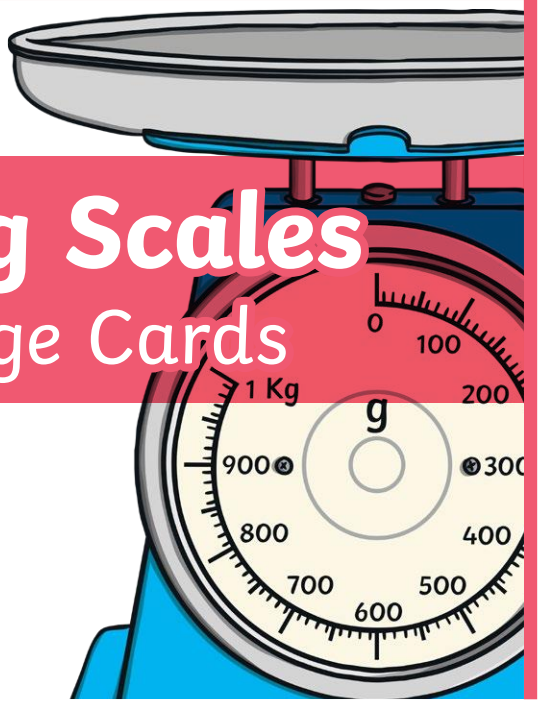
8. Pete the Pirate and his 2 brothers find some money.

They have a sister called Poppy.

If the brothers shared the money just amongst themselves, they would each get £20 more, than if they shared it equally with their sister too.

What was the sum of money that they had found?

Reading Scales
Challenge Cards



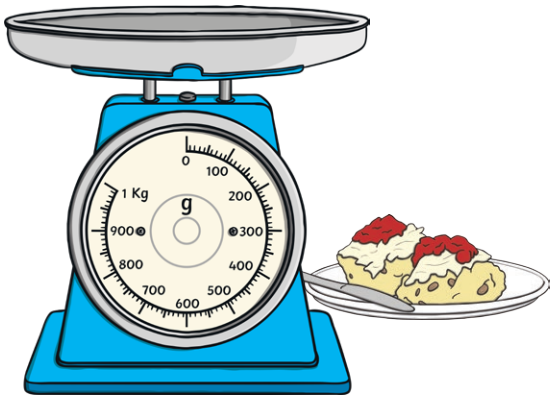
To make scones buns I need 275g sugar, 525g flour and 325g sultanas.

Mark these quantities on the scale below.

sugar

flour

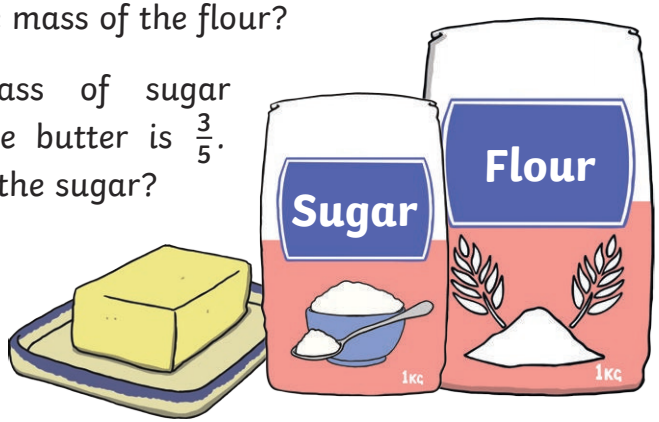
sultanas



I need to mix some cupcakes, but all of the ingredients are on the scales at the same time. The scale reads 760g.

I know the mass of the flour is as much as the sugar and butter together. What is the mass of the flour?

Challenge: The mass of sugar is, $\frac{2}{5}$ the mass of the butter is $\frac{3}{5}$. What is the mass of the sugar?

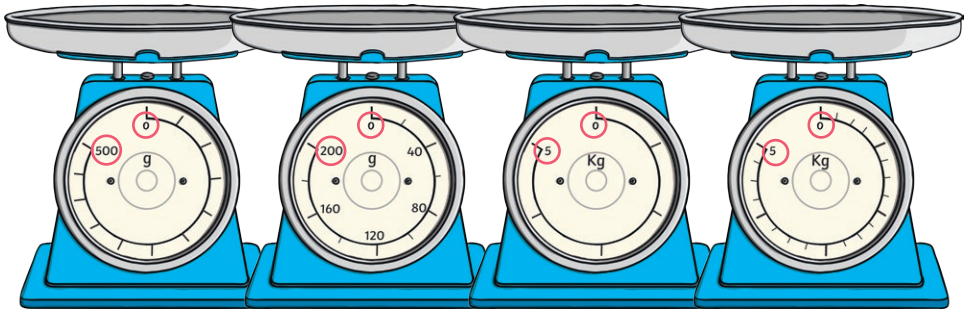


I need to convert some quantities in the recipes I am going to try. Match the equivalent quantities below with a line.

470g	3250ml
3.25l	5.0m
500cm	0.470kg
2.65kg	2650g
	0.275ml
	3.25kg
	5000mm
	0.0265kg

Reading Scales 4

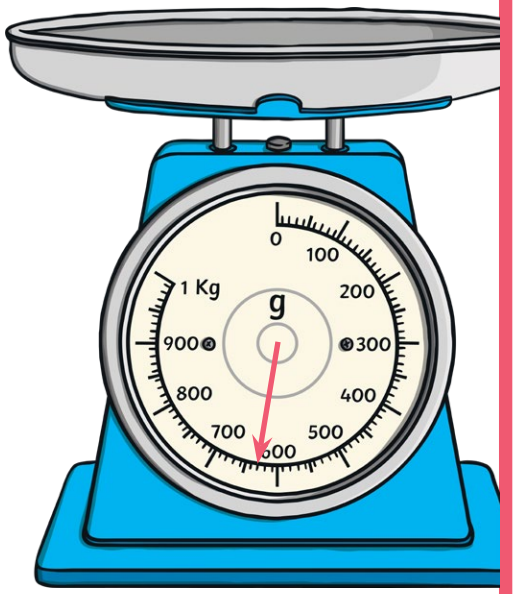
From the scales shown, state what each labelled interval represents.



_____ _____ _____ _____

Reading Scales 5

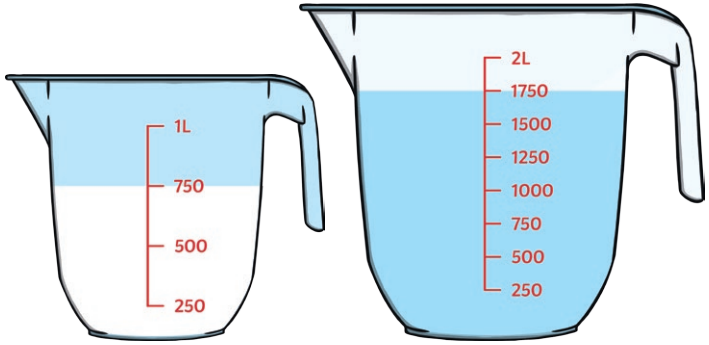
What is the mass of sugar on these scales? If I add another 90g of sugar, draw the pointer at the correct place on the scales.



Reading Scales 6

In one jug I have water for school lunch. In the other I have milk. How much of each drink have I got? How much have I got altogether?

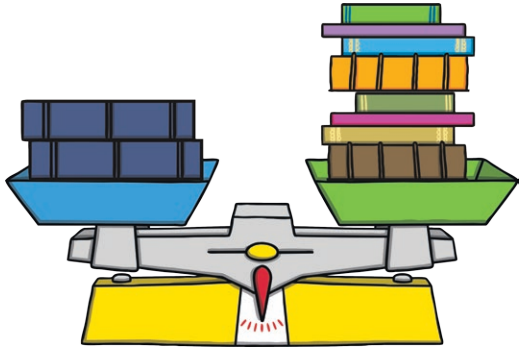
Challenge: Record the volume of water and milk in ml and l.



Reading Scales 7

On this balance scale, is one exercise book heavier than one dictionary?

What is the mass of one exercise book compared to one dictionary? Record your answer as a fraction?



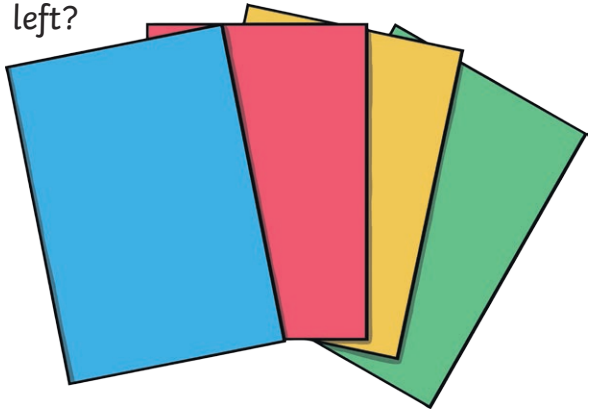
The total mass of a bowl and ingredients for cupcakes is 246g. There is enough mixture to fill 7 equal cupcake cases. When 3 cupcake cases are filled, the mass of the bowl and ingredients is 225g.

What is the mass of the bowl?

I have to put backing paper on four display boards in school. If I cut a 3m roll of paper into 65cm lengths will I have enough for all 4 boards?

Do I have any paper left? If so how much?

Record your answer in m, cm and mm.



The school secretary is ordering supplies for KS2 classes. Fill in the missing items to scale the stock up or down.

Quantity	Pencils	Rubbers	Rulers	Books
5	50p			
10		20p		
50			£7.50	
75				£13.50

Answers

1. Sugar - **275g**
   Flour - **525g**
   Sultanas - **325g**

2. Mass of flour: **760g ÷ 2 = 380g**.
   Challenge: **Sugar = $\frac{2}{5}$ of remaining mass so 380g ÷ 5 × 2 = 152g**

3. 470g - **0.470kg**
   3.25l - **3250ml**
   500cm - **5.0m and 5000mm**
   2.65kg - **2650g**

4. Scale 1: **50g intervals**
   Scale 2: **20g intervals**
   Scale 3: **1kg intervals**
   Scale 4: **250g intervals**

5. **630g marked on scale. With an extra 90g it would read 720g.**

6. Water: **1750ml or 1.75l**. Milk: **750ml or 0.75l**.
   Total volume: **2500ml or 2.5l.**

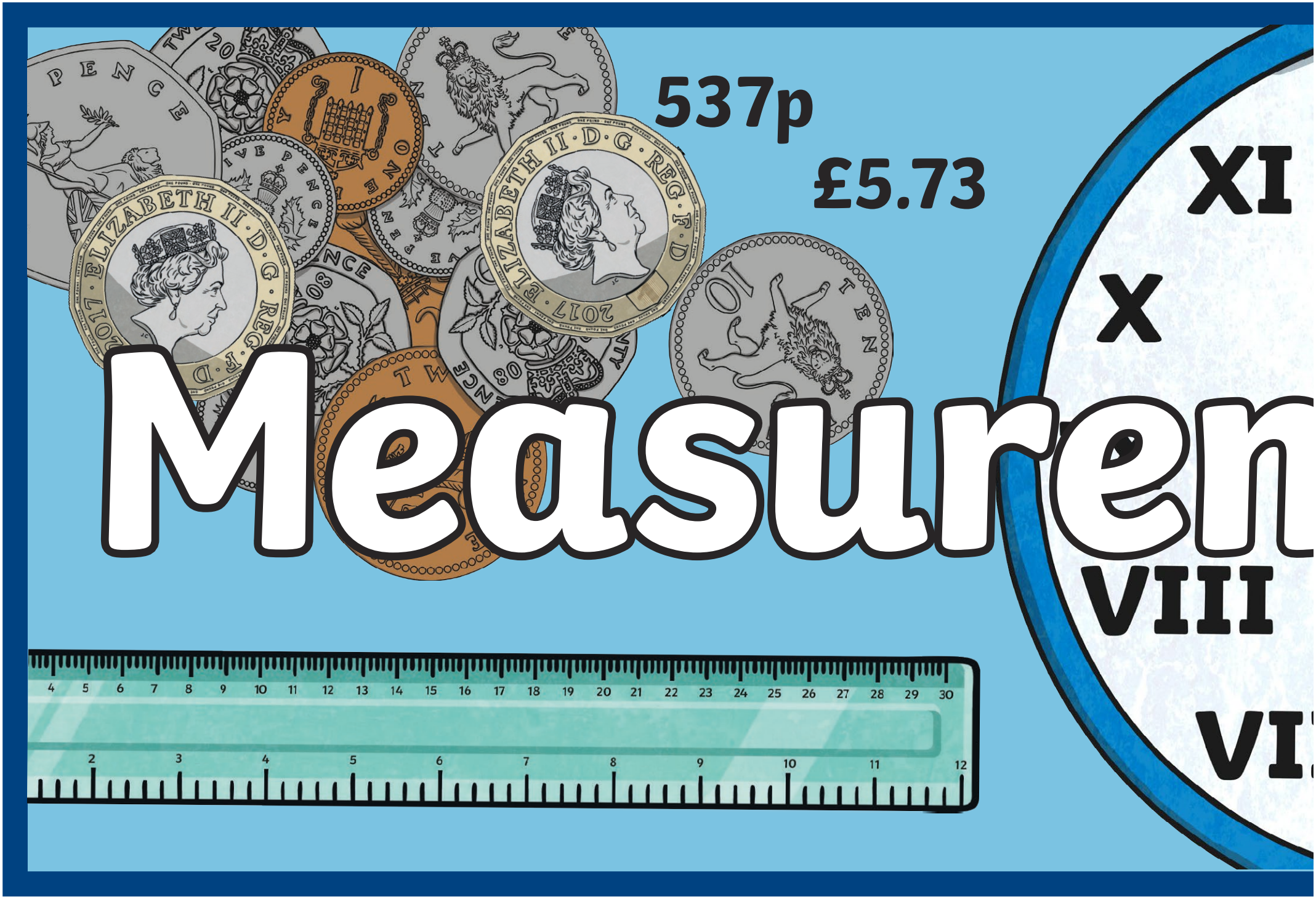
7. No, one exercise book is not heavier than one dictionary.
   Each exercise book is equal to $\frac{1}{4}$ the mass of each dictionary.

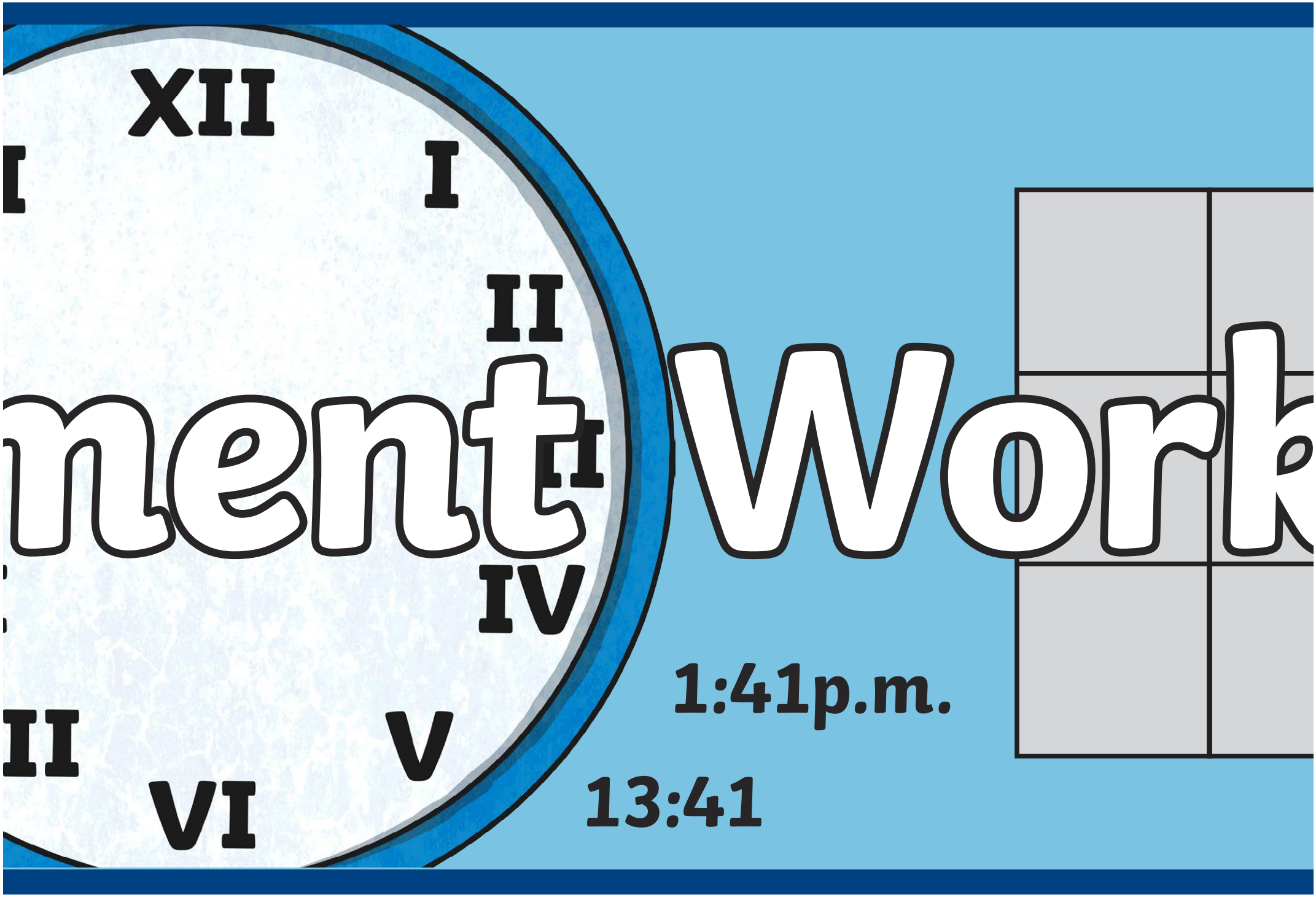
8. 246g - 225g = 21g
   21g ÷ 3 = 7g for each spoonful of cupcake mix
   7g × 7 = 49g of cupcake mix
   246g - 49g =1 97g. **The bowl weighs 197g**.

9. 65cm × 4 = 260cm. **Yes I have enough paper.**
   There is 0.4m or, 40cm or, 400mm paper left.

10.

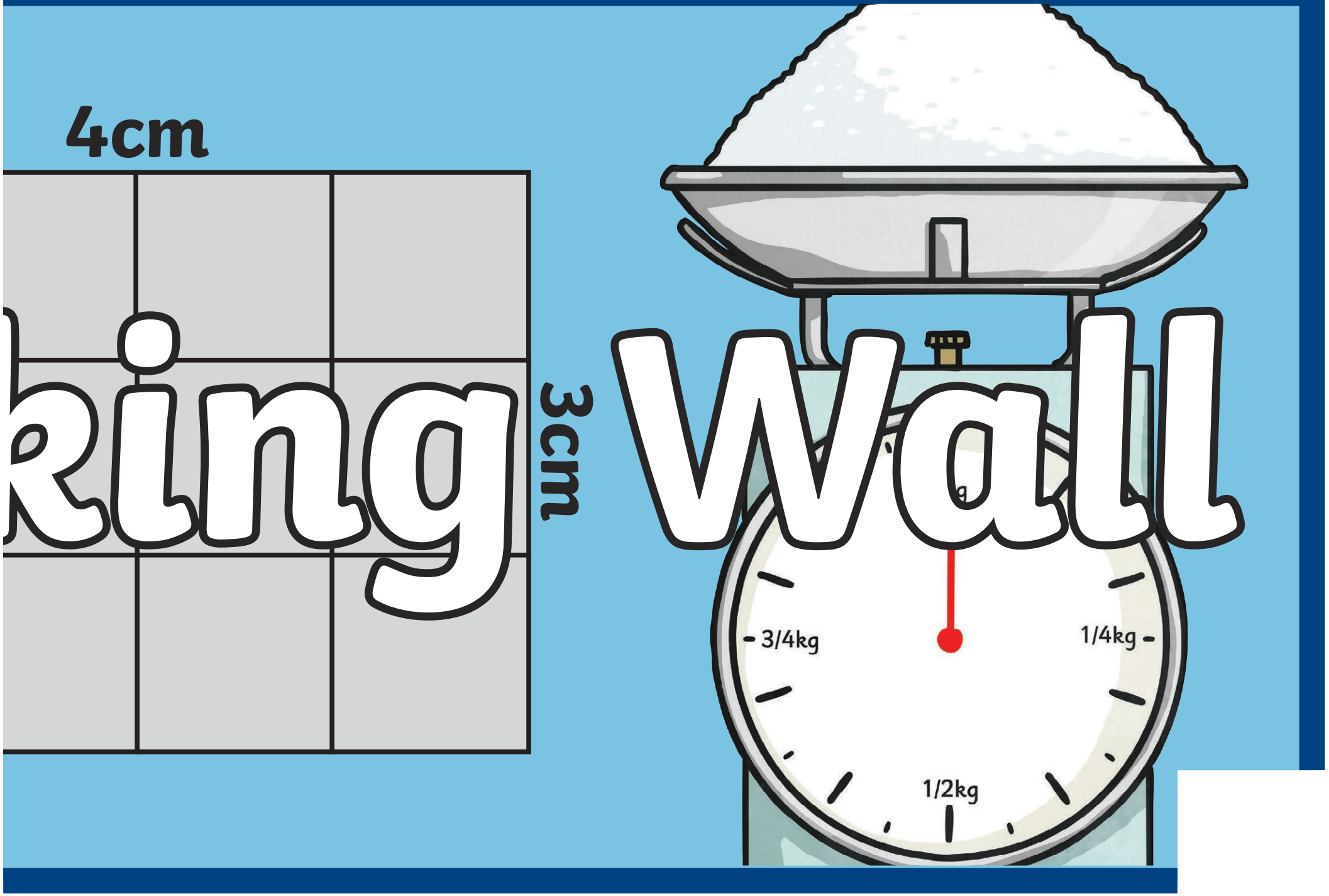
Quantity	**Pencils**	**Rubbers**	**Rulers**	**Books**
5	50p	**10p**	**75p**	**90p**
10	**£1.00**	20p	**£1.50**	**£1.80**
50	**£5.00**	**£1.00**	£7.50	**£9.00**
75	**£7.50**	**£1.50**	**£11.25**	**£13.50**


537p
£5.73
XI
X
VIII
Measuren


XII
I
II
IV
VI
V
nent
Work
1:41p.m.
13:41

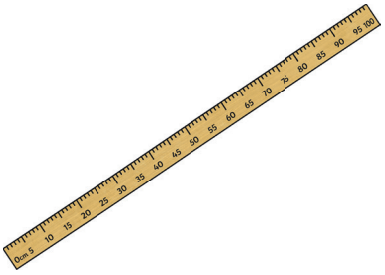
4cm

3cm



millimetre

metre



kilometre

centimetre

length

gram

kilogram

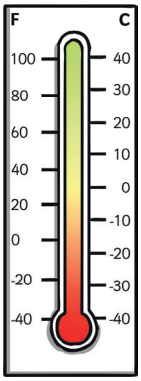
mass

money

pounds

pence

temperature

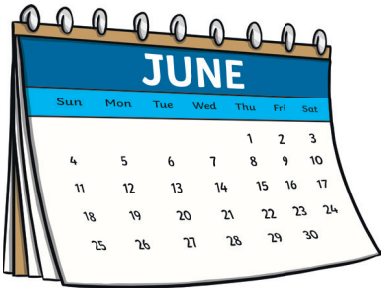


degrees Celsius

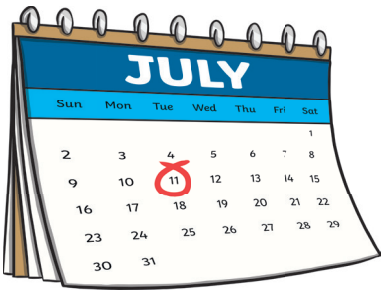
leap year

year

month



day



hour

minute

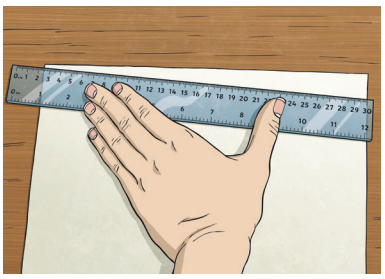
twelve hour clock

twenty-four hour clock

Roman numerals I II

convert

measure



compare

volume

capacity

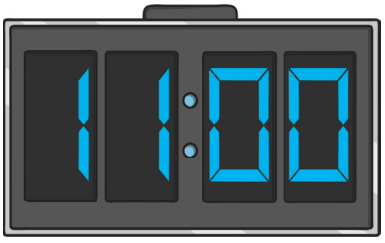
millilitre

litre

perimeter

analogue clock

digital clock



estimate

seconds

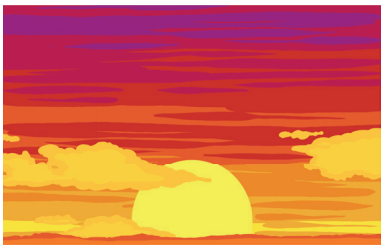
o'clock

a.m.

p.m.

morning

afternoon

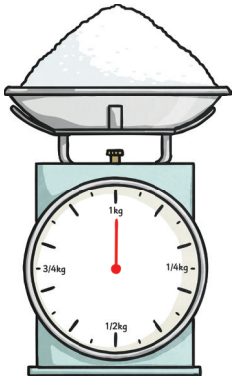


noon

midnight

duration

scales



integer

area

cubic centimetre

cm^3

cubic metre

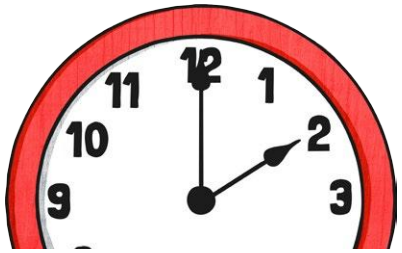
m^3

week

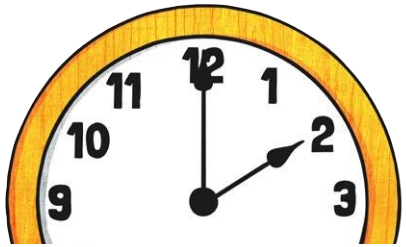
Solve Problems Involving Converting Time

Challenge Cards

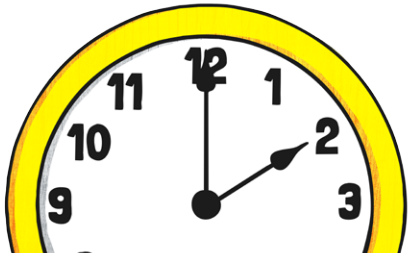
1. What is 513 minutes in hours and minutes?



2. What is 3 hours and 14 minutes in minutes alone?

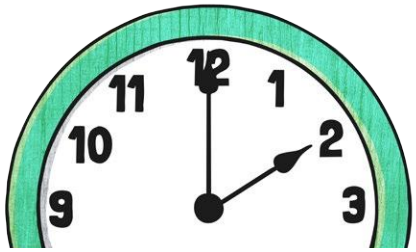


3. How many seconds are there in 5 minutes and 37 seconds?



Solve Problems Involving Converting Time

4. Rewrite three hundred and eighty-six minutes in hours and minutes.

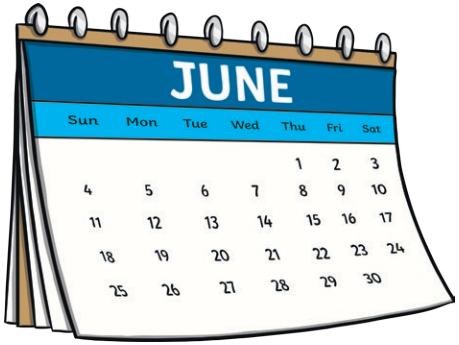


Solve Problems Involving Converting Time

5. How many years and months are there in 65 months?

Solve Problems Involving Converting Time

6. What is seven years and eleven months in months alone?

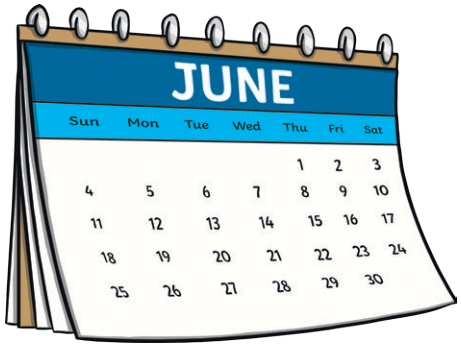


Solve Problems Involving Converting Time

7. Convert 86 days into weeks and days.

Solve Problems Involving Converting Time

8. How many days are there in 18 weeks and 5 days?



Solve Problems Involving Converting Time

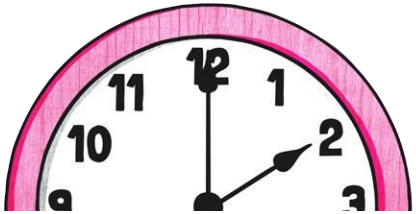
9. Isabella swims 4 lengths of a swimming pool. Her target is to swim the lengths in under 5 minutes. It takes her 319 seconds. Explain why Isabella did not achieve her target.

Solve Problems Involving Converting Time

10. A child's school year has 38 school weeks of 5 days. In a non-leap year, how many days does each child not have to go to school?

Solve Problems Involving Converting Time

11. A year 6 class has 5 maths lessons during the week. Each lesson lasts 1 hour and 15 minutes. How many hours and minutes will they have maths lessons in a seven-week half term?

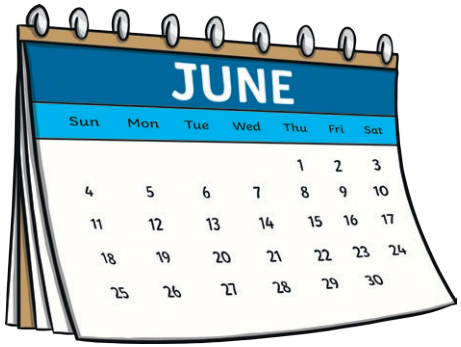


Solve Problems Involving Converting Time

12. Aisha is 10 years and 5 months old. Her brother Amit is 6 years and 11 months old. How much older is Aisha in years and months.

Solve Problems Involving Converting Time

13. Daniella saves 10p a day. Her target is to save £4.50. How many weeks and days will it take?



Solve Problems Involving Converting Time

14.A family has lived in a house for 12 years and 7 months. They want to have a party to celebrate 20 years of living in the house. How many months will they have to wait until the party?

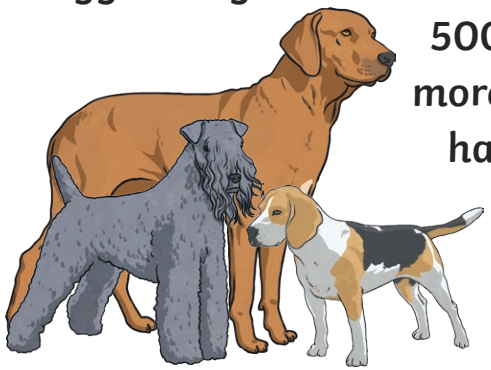
Solving Problems Involving Converting Time **Answers**

question	answer
1	8 hours 33 minutes
2	194 minutes
3	337 seconds
4	6 hours and 26 minutes
5	5 years and 5 months
6	95 months
7	12 weeks and 2 days
8	131 days
9	319 seconds is more than 300 seconds (5 minutes).
10	175 days
11	43 hours and 45 minutes
12	3 years 6 months
13	6 weeks and 3 days.
14	89 months

Measurement
Challenge Cards

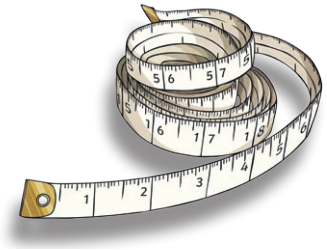
Pet's Mass

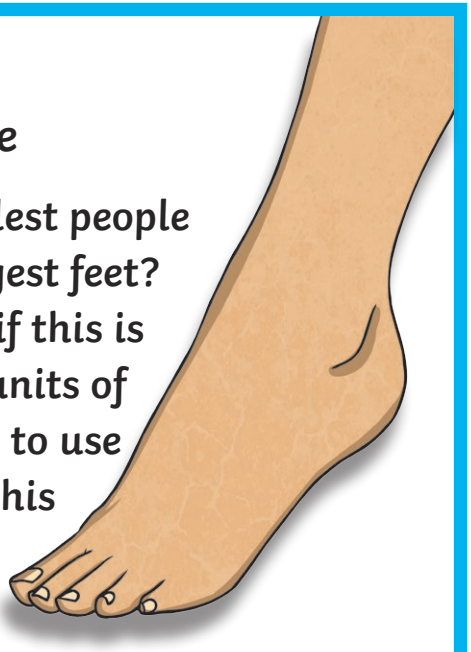
Jamie has three dogs. The smallest dog is called King, the middle sized dog is called Petra and the biggest dog is called Gulliver. Petra weighs 12kg 500g. Gulliver weighs 3kg more than Petra and King is half the weight of Petra. What is the total mass of all 3 dogs?



Tallest People

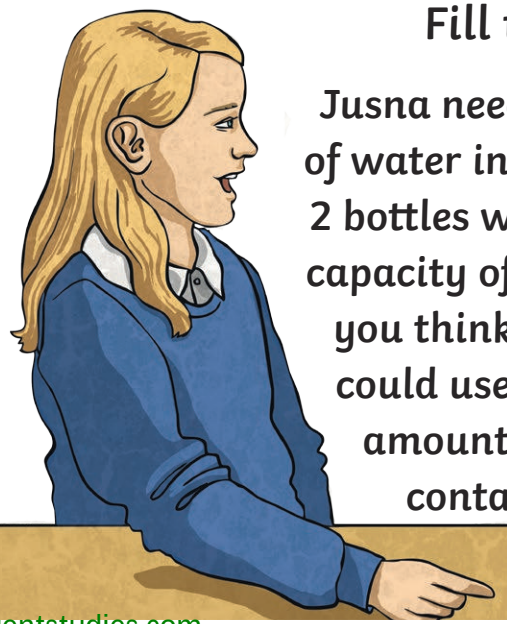
Do you think that the tallest people will always have the longest feet? In a small group find out if this is true or not. Decide which units of measurement you are going to use to answer this problem.





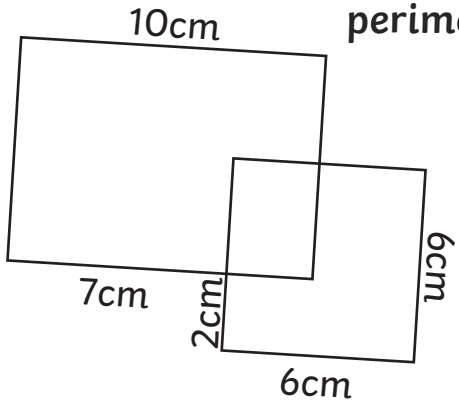
Fill that Container

Jusna needs to put 1 litre 300ml of water into a container. She has 2 bottles which she knows have a capacity of 250ml and 100ml. Can you think of 3 different ways she could use the bottles to put the amount of water into the container she needs?



Perimeter

These 2 rectangles overlap to make another rectangle. Use the information to work out the perimeter of the rectangle in the middle:



How Much Money?

I have 5 coins in my pocket. 2 of them are silver, the rest are bronze. Show 5 different amounts I could have:

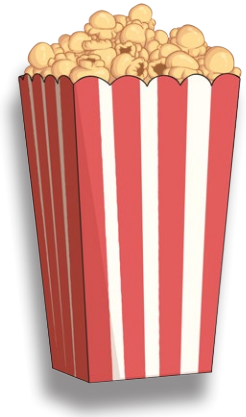
Here is an example:

5p + 5p + 2p + 2p + 1p = 15p

What is the greatest total you can make?

Tick Tock Film O'Clock

I'm going to the cinema to watch my favourite film. It lasts for 130 minutes. It takes 5 minutes to walk to the bus stop. If I start watching the movie at 3:10pm will I be able to catch the 5.30pm bus home without missing part of the movie? Explain your answer.



Chimes

A clock chimes once for every hour (e.g. 5 o'clock would be 5 chimes) and once every half hour. Throughout the day, how many times would the clock chime?

How Long?

On Monday I start jogging at 2:10p.m. and finish at 2:55p.m. How long have I been jogging for? The next day I go jogging again and run for twice as long. How long in hours and minutes do I run over the 2 days?

Measurement Challenge Cards **Answers**

Pet's Mass

Jamie has three dogs. The smallest dog is called King, the middle sized dog is called Petra and the biggest dog is called Gulliver. Petra weighs 12kg 500g. Gulliver weighs 3kg more than Petra and King is half the weight of Petra. What is the total mass of all 3 dogs?

34kg 250g

Tallest People

Do you think that the tallest people will always have the longest feet? In a small group find out if this is true or not. Decide which units of measurement you are going to use to answer this problem.

Answers dependent upon the children's measurements. Children should answer the question and provide the evidence from the measurements they make.

Fill that Contain

Jusna needs to put 1 litre 300ml of water into a container. She has 2 bottles which she knows have a capacity of 250ml and 100ml. Can you think of 3 different ways she could use the bottles to put the amount of water into the container she needs?

Answers show combinations of 250ml and 100ml which total 1litre 300ml

Perimeter

These 2 rectangles overlap to make another rectangle. Use the information to work out the perimeter of the rectangle in the middle:

Perimeter = 14cm

How Much Money?

I have 5 coins in my pocket. 2 of them are silver, the rest are bronze. Show 5 different amounts I could have:

Children's answers show 5 different totals, each combination including 2 silver coins and 3 bronze coins.

What is the greatest total you can make?

Greatest total = £1.06

Tick Tock Film O'clock

I'm going to the cinema to watch my favourite film. It lasts for 130 minutes. It takes 5 minutes to walk to the bus stop. If I start watching the movie at 3:10pm will I be able to catch the 5.30pm bus home without missing part of the movie? Explain your answer.

Yes, there would be enough time to catch the bus. Answer explains that the film ends at 5:20p.m., the walk to the bus would mean she would be there at 5:25p.m., leaving enough time.

Chimes

A clock chimes once for every hour (e.g. 5 o'clock would be 5 chimes) and once every half hour. Throughout the day, how many times would the clock chime?

180 chimes

How Long?

On Monday I start jogging at 2:10p.m. and finish at 2:55p.m. How long have I been jogging for?

45 minutes

The next day I go jogging again and run for twice as long. How long in hours and minutes do I run over the 2 days?

2 hours 15 minutes

Train Timetable

Challenge Cards

Train Timetable

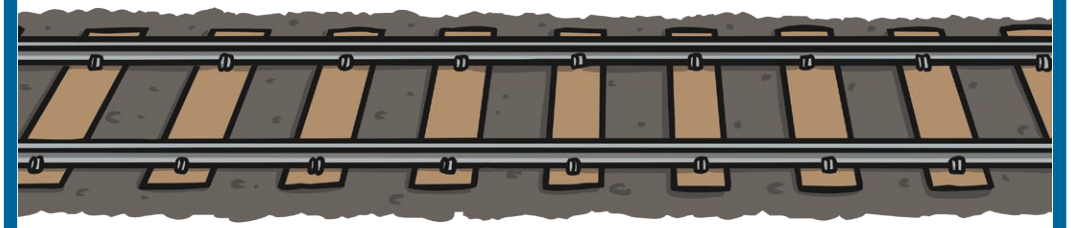
1. Journey B takes 1 hour to get from London to Derby. What time do you arrive at Derby?

Train Timetable

2. Journey C takes a total of 3 hours, what time does it arrive at Newcastle?

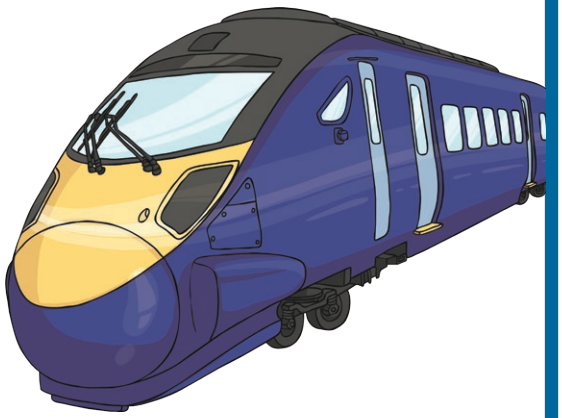
Train Timetable

3. How long does journey A take?



Train Timetable

4. You need to be at Hull for 13:30, which is the best train to catch?

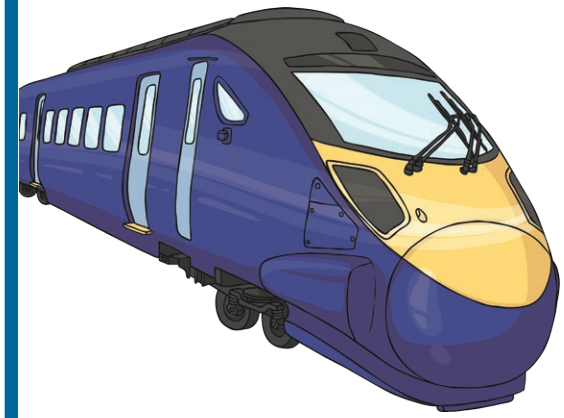


Train Timetable

5. You arrive at Sheffield train station at 18:10. How long do you have to wait for the next train to Newcastle?

Train Timetable

6. How many stations does the 11:30 train stop at before it reaches Hull?



Train Timetable

Challenge Cards

Train Timetable

★★

1. Journey B takes 1 hour 15 mins to get from London to Derby. What time do you arrive at Derby?

Train Timetable

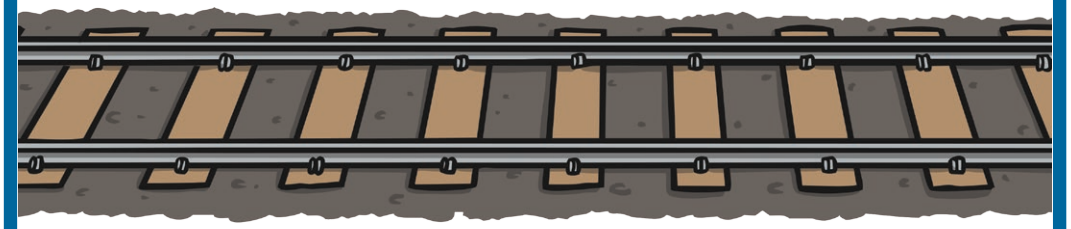
★★

2. Journey C takes a total of 3 hours, what time does it arrive at Newcastle?

Train Timetable

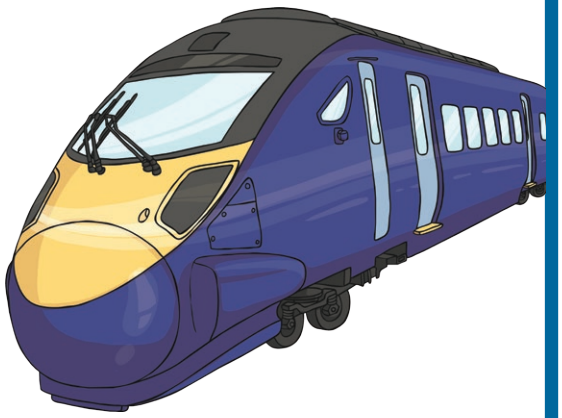
★★

3. How long do journeys A and B take?



Train Timetable ★★

4. You need to be at Hull for 13:30, which is the best train to catch?

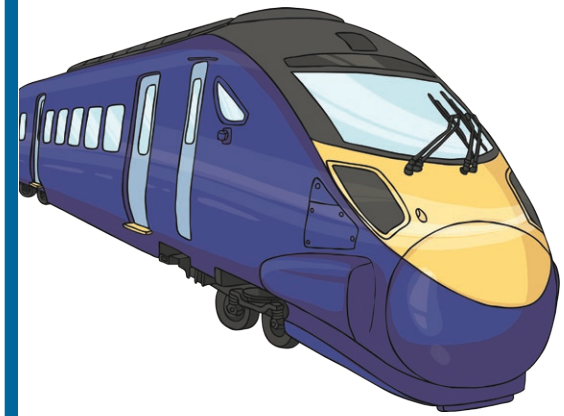


Train Timetable ★★

5. You get to Sheffield at 16:50. How long do you have to wait for a train to Newcastle?

Train Timetable ★★

6. How many stations does the 11:30 train stop at before it reaches Hull?



Train Timetable

Challenge Cards

Train Timetable

★★★

1. Journey B takes 1 hour and 16 mins to get from London to Derby. What time do you arrive at Derby?

Train Timetable

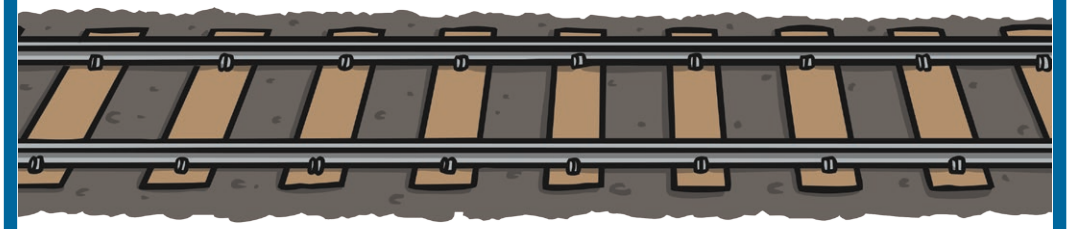
★★★

2. Journey C takes a total of 3 hours and 5 minutes, what time does it arrive at Newcastle?

Train Timetable

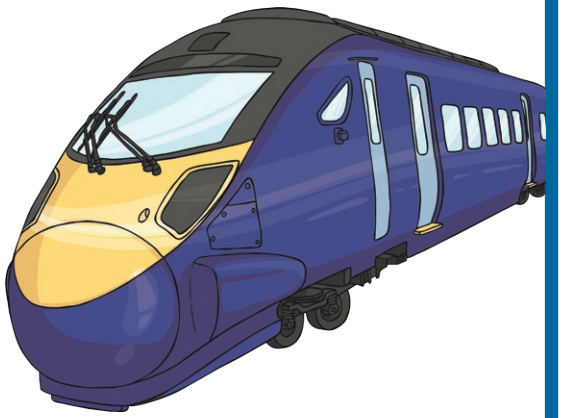
★★★

3. How long do journeys A and B take? What is the difference in time?



Train Timetable

4. You need to be at Hull for 15:30, which is the best train to catch? How long will you need to wait?

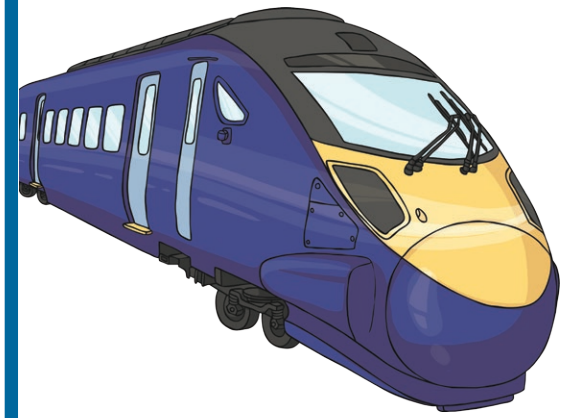


Train Timetable

5. You arrive at Sheffield train station at 16:50. How long do you have to wait for the next train to Newcastle?

Train Timetable

6. How many stations does the 11:37 train stop at before it reaches Hull?



Train Timetable **Answers**

★	★★	★★★
1. 12:30 **2. 19:40** **3. 4 hours 5 minutes** **4. Journey A** **5. 20 minutes** **6. 2 stations**	**1. 12:45** **2. 19:40** **3. Journey A = 3 hours 50 minutes, Journey B = 3 hours 5 minutes** **4. Journey A** **5. 1 hour 40 minutes** **6. 2 stations**	**1. 12:53** **2. 19:48** **3. Journey A = 3 hours 49 minutes, Journey B = 2 hours 57 minutes, Difference = 52 minutes** **4. Journey A or B. Journey A = 2 hours 14 minutes, Journey B = 1 hour 32 minutes** **5. 1 hour 37 minutes** **6. 2 stations**

Train Timetable

Destination	Journey A	Journey B	Journey C
London	10:20	11:30	16:40
Derby	12:20		18:00
Sheffield	12:40	13:10	18:30
Hull	13:20	13:55	19:15
Newcastle	14:25	14:40	
Duration			3 hours

Train Timetable

Destination	Journey A	Journey B	Journey C
London	10:15	11:30	16:40
Derby	12:15		18:05
Sheffield	12:40	13:10	18:30
Hull	13:20	13:55	19:15
Newcastle	14:05	14:35	
Duration			3 hours

Train Timetable

Destination	Journey A	Journey B	Journey C
London	10:17	11:37	16:43
Derby	12:12		18:08
Sheffield	12:38	13:08	18:27
Hull	13:16	13:58	19:14
Newcastle	14:06	14:34	
Duration			3 hours 5 minutes