



# Factors, Multiples and Prime Numbers

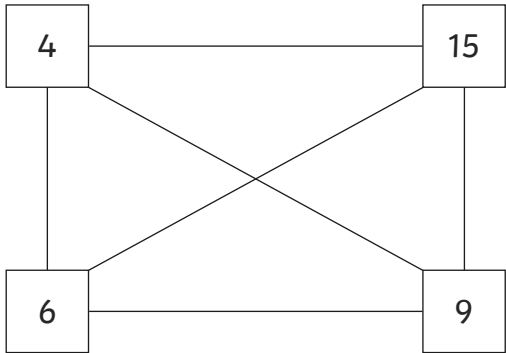
I can identify common factors, common multiples and prime numbers.



1) What is the highest common factor of 32 and 52 multiplied by the highest common factor of 12 and 48?

\_\_\_\_\_

2) Work out the lowest common multiple of each pair of linked numbers.



- 4 and 15 \_\_\_\_\_
- 4 and 9 \_\_\_\_\_
- 4 and 6 \_\_\_\_\_
- 15 and 9 \_\_\_\_\_
- 15 and 6 \_\_\_\_\_
- 9 and 6 \_\_\_\_\_

3) Write three pairs of prime numbers that, when added together, create square numbers.

\_\_\_\_\_ and \_\_\_\_\_  
\_\_\_\_\_ and \_\_\_\_\_  
\_\_\_\_\_ and \_\_\_\_\_





# Factors, Multiples and Prime Numbers **Answers**

Question	Answer						
1.	What is the highest common factor of 32 and 52 multiplied by the highest common factor of 12 and 48?						
$4 \times 12 = 48$							
2.	Work out the lowest common multiple of each pair of linked numbers.						
<table><tbody><tr><td>4 and 15 <u>60</u></td><td>15 and 9 <u>45</u></td></tr><tr><td>4 and 9 <u>36</u></td><td>15 and 6 <u>30</u></td></tr><tr><td>4 and 6 <u>12</u></td><td>9 and 6 <u>18</u></td></tr></tbody></table>		4 and 15 <u>60</u>	15 and 9 <u>45</u>	4 and 9 <u>36</u>	15 and 6 <u>30</u>	4 and 6 <u>12</u>	9 and 6 <u>18</u>
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4 and 6 <u>12</u>	9 and 6 <u>18</u>						
3.	Write three pairs of prime numbers that, when added together, create square numbers.						
<i>Example answers: 2 and 7, 11 and 5, 13 and 3, 47 and 2, 23 and 2</i>							

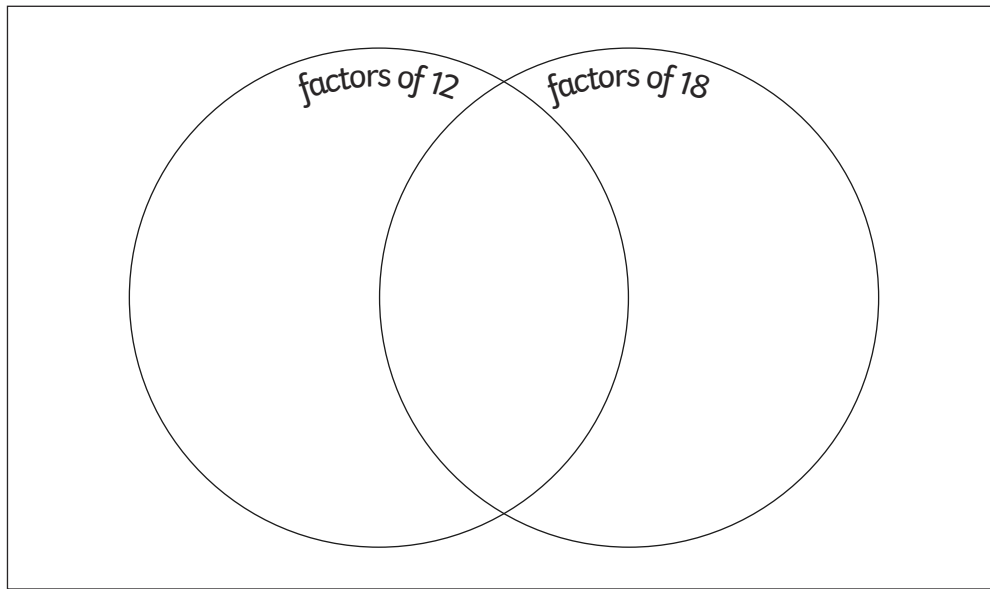


# Factors, Multiples and Prime Numbers

I can identify common factors, common multiples and prime numbers.



- 1) Use the numbers 1-18 to complete this Venn diagram:



- 2) What is the lowest common multiple for each set of numbers?

12 and 20 \_\_\_\_\_

6 and 14 \_\_\_\_\_

11 and 15 \_\_\_\_\_

- 3) Look at the numbers in the circles. Write the nearest prime number lower than the number in the left-hand boxes and the nearest prime number higher in the right-hand boxes.

<input type="text"/>	←	45	→	<input type="text"/>
<input type="text"/>	←	15	→	<input type="text"/>
<input type="text"/>	←	9	→	<input type="text"/>
<input type="text"/>	←	68	→	<input type="text"/>
<input type="text"/>	←	34	→	<input type="text"/>





# Factors, Multiples and Prime Numbers **Answers**

Question	Answer
1.	Use the numbers 1-18 to complete this Venn diagram:
2.	What is the lowest common multiple for each set of numbers?
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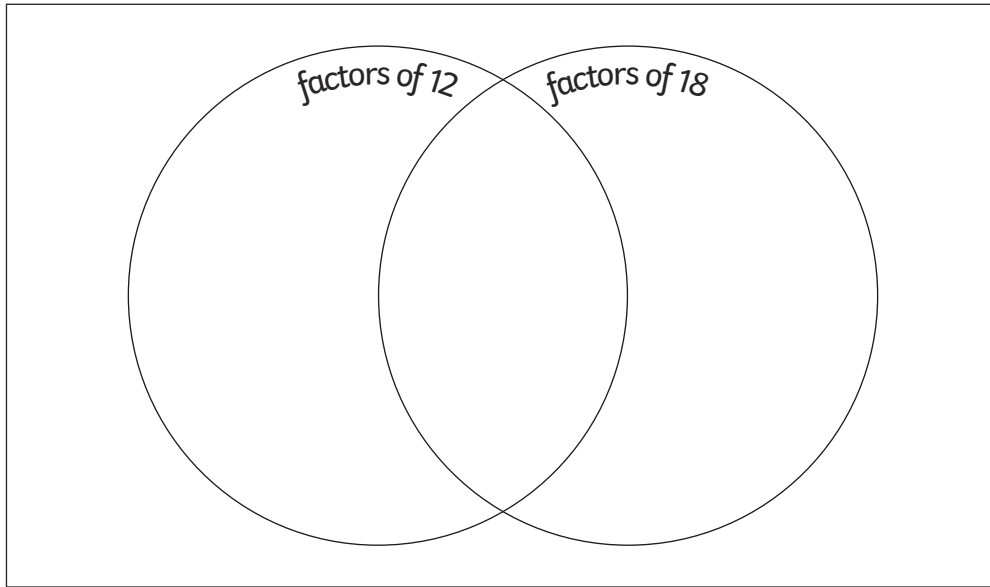


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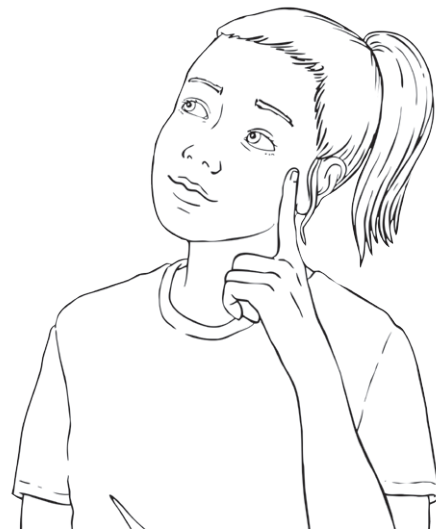
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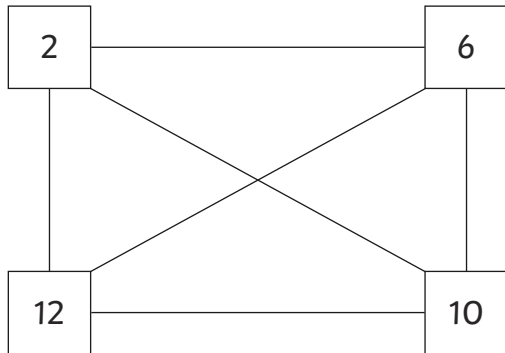
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- 1) a) What is the highest common factor of 24 and 36? \_\_\_\_\_
- b) What is the highest common factor of 21 and 54? \_\_\_\_\_
- c) What is the highest common factor of 19 and 48? \_\_\_\_\_

2) Work out the lowest common multiple of each pair of linked numbers.



- 2 and 6 \_\_\_\_\_
- 6 and 10 \_\_\_\_\_
- 6 and 12 \_\_\_\_\_
- 2 and 10 \_\_\_\_\_
- 10 and 12 \_\_\_\_\_
- 2 and 12 \_\_\_\_\_

Which pairs of numbers have the same lowest common multiple?

\_\_\_\_\_

3) Oh no! The maths machine has broken!  
Can you help identify the prime numbers by circling the correct balls?

( 45 )	( 59 )	( 32 )	( 21 )
( 134 )	( 121 )	( 85 )	( 73 )
( 53 )	( 147 )	( 163 )	( 171 )









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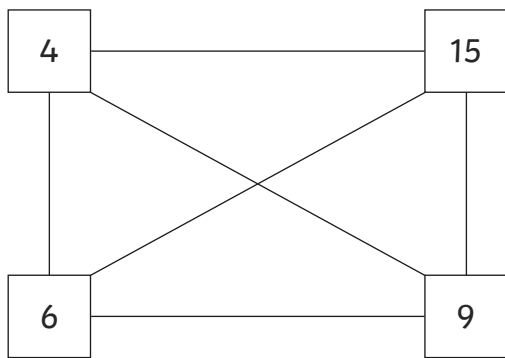
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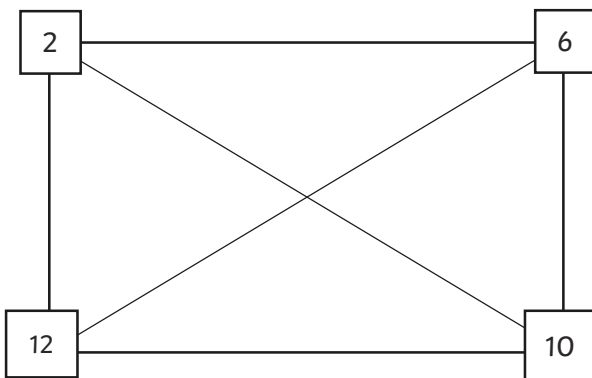
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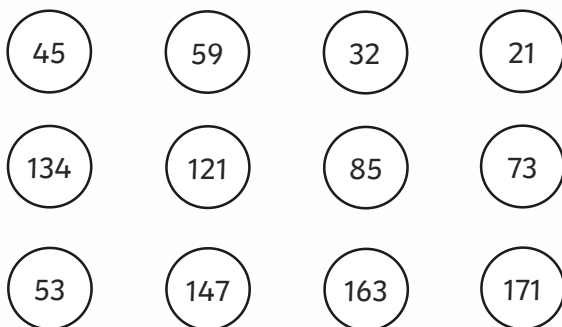
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- 2 and 6 \_\_\_\_\_  
6 and 10 \_\_\_\_\_  
6 and 12 \_\_\_\_\_  
2 and 10 \_\_\_\_\_  
10 and 12 \_\_\_\_\_  
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Which pairs of numbers have the same lowest common multiple?  
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# Factors, Multiples and Prime Numbers **Answers**

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2.	Work out the lowest common multiple of each pair of linked numbers.												
	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">2 and 6 <b>6</b></td> <td style="width: 50%; border: none;">2 and 10 <b>10</b></td> </tr> <tr> <td style="border: none;">6 and 10 <b>30</b></td> <td style="border: none;">10 and 12 <b>60</b></td> </tr> <tr> <td style="border: none;">6 and 12 <b>12</b></td> <td style="border: none;">2 and 12 <b>12</b></td> </tr> </table> <p>Which pairs of numbers have the same lowest common multiple? <b>6 and 12, 2 and 12</b></p>	2 and 6 <b>6</b>	2 and 10 <b>10</b>	6 and 10 <b>30</b>	10 and 12 <b>60</b>	6 and 12 <b>12</b>	2 and 12 <b>12</b>						
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