

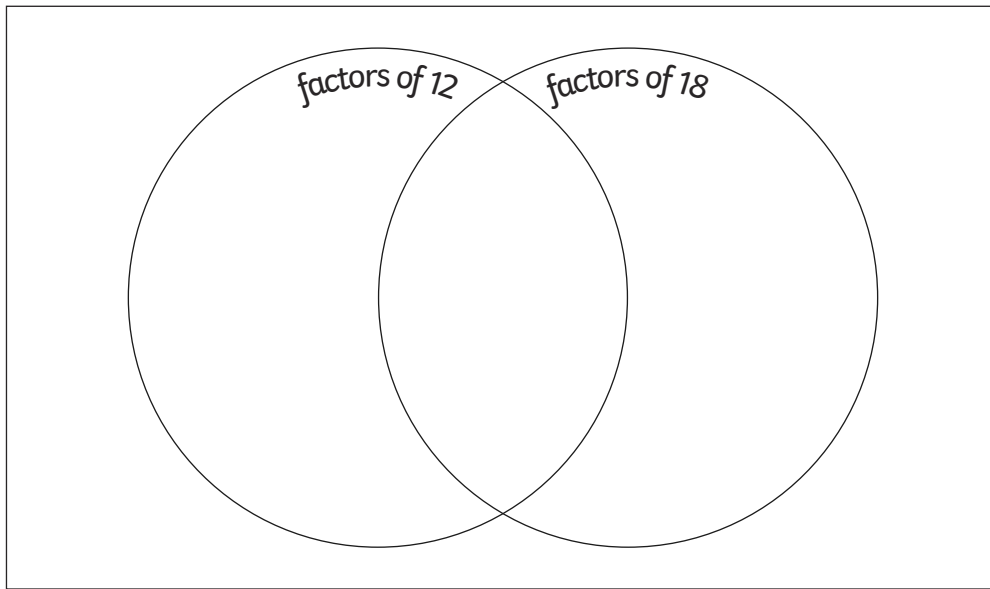


# Factors, Multiples and Prime Numbers

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?

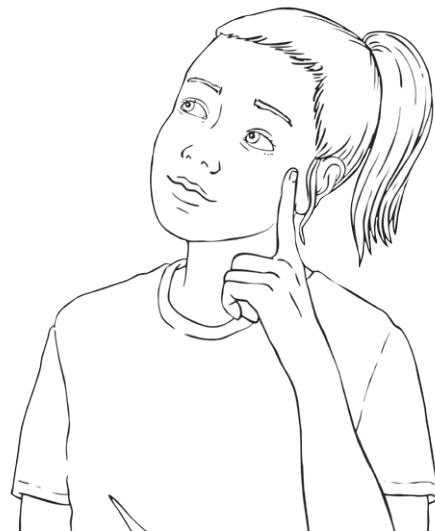
12 and 20 \_\_\_\_\_

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:
	<p>A Venn diagram with two overlapping circles. The left circle is labeled "factors of 12" and contains the numbers 4 and 12. The right circle is labeled "factors of 18" and contains the numbers 9 and 18. The intersection of the two circles contains the numbers 1, 2, 3, and 6. To the left of the diagram are the numbers 5, 7, 8, 10, and 11. To the right are the numbers 13, 14, 15, 16, and 17.</p>
2.	What is the lowest common multiple for each set of numbers?
	12 and 20 <u>60</u> 6 and 14 <u>42</u> 11 and 15 <u>165</u>
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.
	<p>43 ← 45 → 47 13 ← 15 → 17 7 ← 9 → 11 67 ← 68 → 71 31 ← 34 → 37</p>



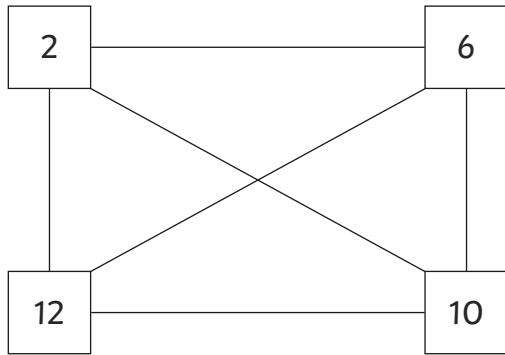
# Factors, Multiples and Prime Numbers

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



- 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 )







# Factors, Multiples and Prime Numbers

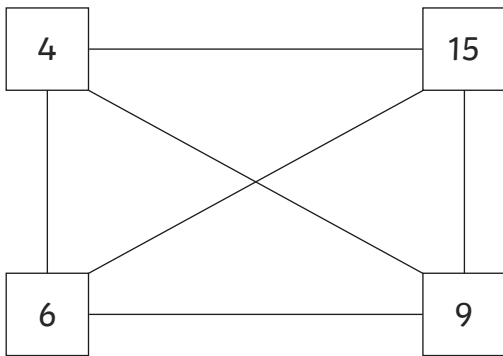
I can identify common factors, common multiples and prime numbers.



- 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						
<b>1.</b>	What is the highest common factor of 32 and 52 multiplied by the highest common factor of 12 and 48?						
$4 \times 12 = 48$							
<b>2.</b>	Work out the lowest common multiple of each pair of linked numbers.						
<table data-bbox="240 645 1040 801"><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></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>
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>						
<b>3.</b>	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>							