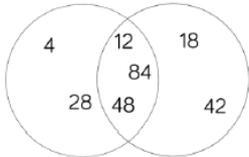
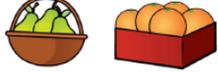
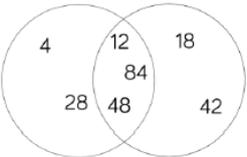


1	<p>What are the common factors of these pairs of numbers?</p> <p>24 and 36 20 and 30 28 and 45</p> <p><i>Tip: List the factors for 24. Then list the factors for 36. Circle or highlight the factors they have in common. Then move on to the next pair.</i></p>
2	<p>Which number is the odd one out?</p> <p>12, 30, 54, 42, 32, 48</p> <p>Can you explain why?</p>
3	<p>Two numbers have common factors of 4 and 9. What could the numbers be?</p>
4	<p>There are 49 apples and 56 pears.</p>  <p>They need to be put into baskets with an equal number in each basket.</p> <p><i>You are making fruit baskets. Basket 1 has a certain number of apples and pears in it; Basket 2 is identical to Basket 2 and so on.</i></p> <p><i>How many baskets? 3 or 5? Why not 5?</i></p> <p><i>How many items of fruit respectively in each?</i></p> <p>Jamil: I think there will be baskets with 8 pieces of fruit in each</p> <p>Noah: I think there will be baskets with 7 pieces of fruit in each</p> <p>Who is correct? Explain how you know.</p>
5	<p>Tom has 2 pieces of string.</p> <p>One is 160cm long and the other is 200cm long.</p> <p>He cuts them into pieces of equal length.</p> <p>What are the possible lengths the string could be?</p> <p>Easy: one solution Medium: three solutions Hard: at least five solutions</p>
6	<p>Work out the headings for the Venn diagram.</p>  <p>Add in one more number to each section.</p> <p>Can you think of a multiple of 6 and 8 that is a square number?</p>

Answers  
on the next  
page

1	<p>What are the common factors of these pairs of numbers?</p> <p>24 and 36 20 and 30 28 and 45</p> <p><i>Tip: List the factors for 24. Then list the factors for 36. Circle or highlight the factors they have in common. Then move on to the next pair.</i></p>	<p>24 and 36 1, 2, 3, 4, 6, 12</p> <p>20 and 30 1, 2, 5, 10</p> <p>28 and 45 apart from one, none</p>
2	<p>Which number is the odd one out?</p> <p>12, 30, 54, 42, 32, 48</p> <p>Can you explain why?</p>	<p>32 – all others are multiples of 3 (or 6)</p> <p>I will not accept 30 because it is the only multiple of 10. I won't accept this because the odd one out is based on all others having something in common.</p>
3	<p>Two numbers have common factors of 4 and 9.</p> <p>What could the numbers be?</p>	<p>any multiple of 36, e.g.</p> <p>36, 72, 108 ...</p>
4	<p>There are 49 apples and 56 pears.</p>  <p>They need to be put into baskets with an equal number in each basket.</p> <p>Jamil: I think there will be baskets with 8 pieces of fruit in each</p> <p>Noah: I think there will be baskets with 7 pieces of fruit in each</p> <p>Who is correct? Explain how you know.</p>	<p>Both numbers are multiples of 7:</p> $7 \times 7 = 49$ $7 \times 8 = 56$ <p>So, if you have 7 baskets, each basket has 7 apples and 8 pears in it.</p>
5	<p>Tom has 2 pieces of string.</p> <p>One is 160cm long and the other is 200cm long.</p> <p>He cuts them into pieces of equal length.</p> <p>What are the possible lengths the string could be?</p>	<p>I am delighted that Tom has 2 pieces of string. I mean, do YOU have two pieces of string??? Then he cuts them into equal pieces! And I thought I was sad knitting socks ...</p> <p>Answers: The highest common factor of 160 and 200 is 40. Therefore, any factor of 40 is a possible answer, i.e. 1 cm, 2 cm, 4 cm, 5 cm, 8 cm, 10 cm, 20 cm, 40 cm.</p>
6	<p>Work out the headings for the Venn diagram.</p>  <p>Add in one more number to each section.</p> <p>Can you think of a multiple of 6 and 8 that is a square number?</p>	<p>Headings:</p> <p>Multiples of 4</p> <p>Multiples of 6</p> <p>144 is a multiple of 6 and 8</p>