



UNITED KINGDOM MATHEMATICS TRUST

<p>1. Find pairs of prime numbers which add up to a square number.</p>	<p>2. Can you work out the first six cube numbers?</p>
<p>3. I have £5.60 in my pocket. I pay for three ice lollies at 45p each and lose a 20p coin on the way home.</p> <p>What is the smallest number of coins I could have in my pocket when I reach home?</p>	<p>4. My bus fare to town is £1.80.</p> <p>If prices go up by 15%, what will my new bus fare be?</p>
<p>5. Evaluate <math>\frac{1}{3} + \frac{1}{2}</math>.</p>	<p>6. Can you share 2016 sweets equally between nine children?</p>
<p>7. Write down six numbers which have a mean of 6, a median of 6, and a mode of 6, but are not all 6.</p>	<p>8. Write down the multiples of 6 that are factors of 480.</p>
<p>9. <math>10! = 10 \times 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1</math></p> <p>What is its last non zero digit?</p>	<p>10. How would you explain in words, without using a diagram, what is meant by a square, and what is meant by a circle?</p>



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<p>1. Find pairs of prime numbers which add up to a square number.</p> <p>There are numerous answers such as <math>5 + 11 = 16</math> or <math>23 + 41 = 64</math></p>	<p>2. Can you work out the first six cube numbers?</p> <p>1, 8, 27, 64, 125</p>
<p>3. I have £5.60 in my pocket. I pay for three ice lollies at 45p each and lose a 20p coin on the way home. What is the smallest number of coins I could have in my pocket when I reach home?</p> <p>Three. Two £2 coins and one 5 pence piece.</p>	<p>4. My bus fare to town is £1.80. If prices go up by 15%, what will my new bus fare be?</p> <p>£2.07</p>
<p>5. Evaluate <math>\frac{1}{3} + \frac{1}{2}</math>.</p> <p><math>\frac{5}{6}</math></p>	<p>6. Can you share 2016 sweets equally between nine children?</p> <p>Yes! Each child receives 224 sweets.</p>
<p>7. Write down six numbers which have a mean of 6, a median of 6, and a mode of 6, but are not all 6.</p> <p>There are numerous answers such as 5, 5, 6, 6, 7, 7 or 4, 5, 6, 6, 7, 8.</p>	<p>8. Write down the multiples of 6 that are factors of 480.</p> <p>6, 12, 24, 30, 48, 60, 96, 120, 240, 480.</p>
<p>9. <math>10! = 10 \times 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1</math> What is its last non zero digit?</p> <p>8</p>	<p>10. How would you explain in words, without using a diagram, what is meant by a square, and what is meant by a circle?</p> <p>Many ways! Try them out with your friends!</p>