



UNITED KINGDOM MATHEMATICS TRUST

1. Find two consecutive prime numbers with a sum of 128.	2. Which cube numbers are less than 100?
3. I have £3.50. Can I afford 3 packets of Rolos and 2 packets of biscuits if a packet of biscuits costs 74p and Rolos cost 68p?	4. It costs £8 for an adult to go to the cinema and 75% of that price for a child. How much will it be for two adults and two children?
5. What is the difference between $\frac{3}{2}$ and $\frac{2}{3}$?	6. How many different ways are there to make a winning line in noughts and crosses? (Don't count the order in which the squares are filled in, just the final lines.)
7. Look at these numbers: 2, 3, 5, 6, 7,, What must the missing numbers be if the mean of all seven numbers is 5, and the mode is 6?	8. Which factors of 72 are multiples of 4?
9. The Fibonacci sequence starts 1, 1, 2, 3..... And you make the next term by adding up the previous two terms. What will be the 12 th term in the sequence?	10. Which quadrilaterals can you name and draw? Which ones have line symmetry? Which ones have rotational symmetry? Which ones have both types of symmetry?



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<p>1. Find two consecutive prime numbers with a sum of 128. 61 and 67</p>	<p>2. Which cube numbers are less than 100? 1, 8, 27 and 64</p>
<p>3. I have £3.50. Can I afford 3 packets of Rolos and 2 packets of biscuits if a packet of biscuits cost 74p and Rolos cost 68p? No - total cost is £3.52</p>	<p>4. It costs £8 for an adult to go to the cinema and 75% of that price for a child. How much will it be for two adults and two children? £28</p>
<p>5. What is the difference between $\frac{3}{2}$ and $\frac{2}{3}$? $\frac{3}{2} - \frac{2}{3} = \frac{9}{6} - \frac{4}{6} = \frac{5}{6}$</p>	<p>6. How many different ways are there to make a winning line in noughts and crosses? (don't count the order in which the squares are filled in, just the final lines) 16 - remember to count O and X!</p>
<p>7. Look at these numbers: 2, 3, 5, 6, 7, ..., ... What must the missing numbers be if the mean of all seven numbers is 5, and the mode is 6? 6 and 6 (total comes to 35)</p>	<p>8. Which factors of 72 are multiples of 4? 4, 8, 12, 24, 36 and 72</p>
<p>9. The Fibonacci sequence starts 1, 1, 2, 3..... And you make the next term by adding up the previous two terms. What will be the 12th term in the sequence? 144, which happens to be 12 squared!</p>	<p>10. Which quadrilaterals can you name and draw? Square, rectangle, kite, parallelogram, rhombus, trapezium, Which ones have line symmetry? Square, rectangle, kite, (and some trapezia) Which ones have rotational symmetry? Square, rectangle, parallelogram, rhombus Which ones have both types of symmetry? Square and rectangle</p>