

Year 6 Summer work - Mathematics

Below are a number of mathematical problems. Try them all, see what you can work out and on paper explain how you found the answers to them. It doesn't matter if you can't do them all so long as you try them and write down what you have done. We would like you to hand your answers to your maths teacher in your first lesson.

Mirror Numbers

Some numbers read the same forwards and backwards, like **22** and **101**.

- (a) How many 'mirror numbers' are there between 1 and 100 inclusive?
 - (b) List all the 'mirror numbers' between 100 and 200.
-

Arrange the Digits

Can you arrange the digits 1, 2, 3, 4, 5, 6, 7, 8, 9 into three 3 - digit numbers, such that their total is close to 1500?

+			
<hr/>			

- (a) Which set of 3 - digit numbers gives the closest total?
 - (b) Can you find other sets of 3 - digit numbers that have the same total as your answer to part (a)?
-

Whole Numbers Only

A student bought 17 pencils for £1.44. She paid 2 pence more for each coloured pencil than for each plain pencil. How many of each kind did she buy?

Horse Comb

A comb for horses has 100 teeth each 1 mm wide. The gaps between the teeth are also 1 mm wide. How long is the comb?



Average Age



The mean age of the four members of 'All Sinners' boy band is 19. What is the mean age when an extra member who is 24 years old joins them?

Wrestling Competition



The Kings of Clubs, Diamonds, Hearts and Spades and their respective Queens, are having an arm wrestling competition. Everyone must wrestle everyone else, except that no King will wrestle his own Queen. How many wrestling bouts are there?

Two Builders



Two builders, Bob and Geri, buy bricks at the same price. Bob sells 10 for £6 and Geri sell 12 for £7. Supposing they sell equal numbers of bricks, what number has each sold when Bob has gained £4 more than Geri?