Hampstead Tuition Centre
Small-group Maths, English & Science in Hampstead

Maths Entry Assessment

Question paper

Year 6
placement screener

Name ..... Date ..... Score .....

Time: about 40 minutes. Answer every question. Show your working clearly, because some marks are given for the method even if your final answer is wrong. You may not use a calculator. Read each question carefully and check whether it asks for one step or several. You have about 40 minutes. Show your working where you can. Marks for each question are shown in brackets, like [2]. Total marks: **40**.

1 Write the number 6 049 308 in words, and then write its value rounded to the nearest hundred thousand. **[2]**

WORKING

Answer _____

PLACE VALUE / ROUNDING

2 Calculate 3.6 + 0.45 + 12. Then calculate 8 minus 2.75. **[2]**

WORKING

Answer _____

DECIMAL CALCULATION

3 Work out 7/12 minus 1/4. Give your answer as a fraction in its simplest form. **[2]**

WORKING

Answer _____

FRACTIONS

4 A coat costs 80 pounds. In a sale it is reduced by 15%. Work out the sale price. **[2]**

WORKING

Answer _____

PERCENTAGES

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5 Use long multiplication to work out 346 × 27. [3]

WORKING

Answer _____

MULTIPLICATION

6 Work out 4 + 3 × (10 - 2)² divided by 6. Show each step in the correct order. [3]

WORKING

Answer _____

ORDER OF OPERATIONS

7 A recipe for 8 pancakes uses 200 g of flour and 3 eggs. Megan wants to make 20 pancakes. How much flour and how many eggs does she need? [3]

WORKING

Answer _____

RATIO / PROPORTION

8 The angles in a triangle are in the ratio 2 : 3 : 4. Work out the size of each angle. [3]

WORKING

Answer _____

RATIO / ANGLES

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9 A rectangle has a perimeter of 54 cm. Its length is twice its width. Work out the area of the rectangle. [3]

WORKING

Answer _____

PERIMETER / AREA / ALGEBRAIC REASONING

10 Tom thinks of a number. He multiplies it by 4, then adds 7. The answer is 43. What number did Tom think of? Show how you reversed the steps. [2]

WORKING

Answer _____

INVERSE OPERATIONS / ALGEBRA

11 Explain why the product of any two even numbers is always a multiple of 4. Use an example to support your explanation. [2]

WORKING

Answer _____

REASONING / PROPERTIES OF NUMBER

12 A coordinate grid has points A(1, 2) and B(7, 2) as two corners of a square. The square sits above the line AB. Write down the coordinates of the other two corners. [2]

WORKING

Answer _____

COORDINATES / GEOMETRY

13 A jug holds 1.5 litres of juice. A glass holds 400 ml. How many full glasses can be poured, and how much juice is left over? [2]

WORKING

Answer _____

MEASURES / DIVISION

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14 The mean of five numbers is 14. Four of the numbers are 10, 12, 16 and 20. Work out the fifth number. [3]

WORKING

Answer _____

MEAN / REVERSE REASONING

15 Sara and Leo share some money in the ratio 5 : 3. Sara gets 18 pounds more than Leo. How much money do they share in total? [3]

WORKING

Answer _____

RATIO (STRETCH)

16 A water tank is 2/5 full. After 36 litres are added, it is 7/10 full. Work out the total capacity of the tank. [3]

WORKING

Answer _____

FRACTIONS OF AN AMOUNT (STRETCH)

End of assessment. Hand your paper back when you are finished. Well done!

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