

Mathematics Assessment

**Band 1 – Test 2**



**Calculators not allowed**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Teacher: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Remember:

* The test is 1 hour long.
* You **must not** use a calculator for any question in this test.
* You will need: pen, pencil, protractor, rubber and a ruler.
* Some formulae you might need are on the next page.
* Try to answer all questions.
* Write all your answers and working in the spaces provided in this test paper – do not use any rough paper. Marks may be awarded for working.
* Check your work carefully.
* Don’t spend too long on one question. Leave it and try the next one.

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| --- |
| Formulae Sheet |
| Perimeter, area, surface area and volume formulae |
| Sphere | Cone |
|  |  |
| Volume = $\frac{4}{3}$πr3Surface Area = 4πr2 | Volume = $\frac{1}{3}$ πr2hCurved Surface Area = πrl |

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| **A – Ratio and Proportion** |
| 1. | Circle the **two** fractions below that are equivalent to $\frac{1}{5}$. $\frac{5}{20}$ $\frac{5}{25}$ $\frac{4}{20}$ $\frac{1}{50}$ $\frac{5}{10}$ | / 2 |
| 2. | Put these decimals in order from **smallest** to **largest**. 0.45 0.504 0.54 0.05 0.4 \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ | / 2 |
| 3. | Write the ratio 18 : 24 in its simplest form.\_\_\_\_:\_\_\_\_ | / 1 |
| **B – Number**  |
| 4. | -2 - 7 = \_\_\_\_ -24 ÷ -3 = \_\_\_\_ | / 2 |
| 5. | Write the value of the 6 in the number 65 498.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | / 1 |
| 6. | From the bubble above, write down:A factor of 8 \_\_\_ A multiple of 5 \_\_\_ A prime number \_\_\_ | / 3 |
| 7. | Express 24 as a product of its prime factors.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | / 3 |
| 8. | 32 = \_\_\_\_ √16 = \_\_\_\_ | / 2 |
| **C - Algebra** |
| 9. | What are the next two terms of the sequence below:6, 11, 16, 21, \_\_\_\_, \_\_\_\_ | / 2 |
| 10. | What coordinate does point A represent? ( \_\_\_ , \_\_\_ )Show the coordinate (-2, 1) on the grid above and label it B. | / 2 |
| 11. | Here is a table for a two-stage number machine.It multiplies by 2 then subtracts 1.Complete the missing numbers in the table.

|  |
| --- |
| **× 3, – 4** |
| **Input** | **Output** |
| 1 | -1 |
| 2 | 2 |
| 3 |  |
| 5 |  |
|  | 20 |

 | / 3 |
| **D – Shape, Space and Measure** |
| 12. | What type of triangle is this? What type of angle is this? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | / 2 |
| 13. | Draw a line 4cm long below. Measure the angle.   \_\_\_\_ º \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | / 2 |
| 14. | Draw all the lines of symmetry on the shape below. | / 2 |
| 15. | Calculate the area and perimeter of the rectangle below.Area = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Perimeter = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | / 4 |
| 16. | Find the number 430 on the number line. Mark it with an arrow ( ↑ ). | / 1 |
| 17. | Here is part of a train timetable from Crewe to London.At what time should the train leave Crewe? \_\_\_\_\_\_\_\_The train should arrive in London at 10 45. How long should the train take to travel from Birmingham to London?  \_\_\_\_\_\_\_\_Grant arrived at Wolverhampton station at 08 17. How many minutes should she have to wait before the 08 40 train leaves? \_\_\_\_\_\_\_\_ | / 3 |
| **E – Data Handling** |
| 18. | Fahiza carried out a survey of colours of cars in her street. Here are her results.

|  |  |  |  |
| --- | --- | --- | --- |
| Silver | White | Silver | White |
| Black | Black | Red | Silver |
| White | Silver | White | White |
| Red | Red | Silver | Black |

Complete the table to show Fahiza’s results.

|  |  |  |
| --- | --- | --- |
| **Colour** | **Tally** | **Frequency** |
| Red |  |  |
| Silver |  |  |
| Black |  |  |
| White |  |  |

 | / 3 |
| 19. | The pictogram shows the number of videos borrowed from a shop on Monday and on Tuesday.Write down the number of videos borrowed on Monday: \_\_\_\_ Tuesday: \_\_\_\_On Wednesday, 40 videos were borrowed. Show this on the pictogram.On Thursday, 15 videos were borrowed. Show this on the pictogram. | / 4 |
| 20. | Out of 34 children, 9 prefer pizza and 6 prefer burgers. 12 students do not like pizza or burgers. How many like pizzas and burgers? Use the Venn diagram below to help you.\_\_\_\_\_\_\_ children | / 2 |
| **F - Probability** |
| 21. | On the probability scale below, mark:with the letter A, the probability that it will snow in Edinburgh in January,with the letter B, the probability that when a fair coin is thrown once it comes down heads,with the letter C, the probability that a dice will show a 4 when it is rolled. | / 3 |
| 22. | Sophie eats in a cafe. She can choose **one** main course and **one** dessert.

|  |  |
| --- | --- |
| **Main Course**BeefRisottoPasta | **Dessert**TiramisuIce creamCheesecake |

One possible combination is (Beef, Tiramisu). Write down all the possible combinations that Sophie can choose. The first one has been done for you.(B , T) | / 2 |