## AQA Paper 1 IF (June 2024)



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This paper has been created based on the most common paper 1 topics from previous years. Due to the nature of some topics they are better suited to paper 1 as if you had a calculator, they would no longer be difficult to do. The paper should be excellent at helping students revise for exams, however, should not be relied upon as the basis for revision. The topics from this paper may well appear in the real exams, however there is absolutely no guarantee of this for the reasons previously mentioned. Some topics may appear, some may not.

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|  | d' 01 stclassmaths |  |
| :---: | :---: | :---: |
| Answer all questions in the spaces provided. |  |  |
| 1 | Work out $50 \%$ of 50 | [1 mark] |
| Answer |  |  |
| 2 | Work out $\frac{1}{5}$ of 40 | [1 mark] |
|  | Answer |  |
| (c) 2024 1stclassmaths |  |  |
| 3 | Write 6\% as a decimal. | [1 mark] |
| 4 | Answer |  |
|  | Write 18:12 in its simplest form. | [1 mark] |
|  | Answer |  |

5 Simplify $3 x+8 y-x+2 y \quad$ [2 marks] | Do not write |
| :--- |
| outside the |
| box |

Answer

6 (a) Work out 307-28
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Answer

6 (b) Work out $2214 \div 3$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Answer $\qquad$

7 Match each calculation on the left with an answer on the right. One has been done for you.


8 A revision website charges users a monthly subscription fee.
New users pay a lower fee for the first month.

## Website Subscription

First month £1. 20
(Usual Price £2.50 per month)

Farheen is a new user and subscribes to the website for 1 year.
Work out the total cost of Farheen subscribing to the website for 1 year. [3 marks]
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Answer £
$9 \quad$ Hugh thinks of a number. His number is
a factor of 20
a prime number
Write down the two different numbers that Hugh could be thinking of.
$\qquad$
$\qquad$

Answers and $\qquad$

10 Here are some units.

| hours | kilograms | inches |
| :---: | :---: | :---: |
| square centimetres | miles per hour | centilitres |

Write a unit from the box above to complete each of the statements below. [3 marks]
$\qquad$ is a unit of length
$\qquad$ is a unit of capacity
$\qquad$ is a unit of mass

11 Write the following in order of size.
Start with the smallest.
$1^{6}$
$2^{5}$
$3^{3}$
$5^{2}$
[3 marks]
[3
$\qquad$
$\qquad$
$\qquad$

Smallest $\qquad$
$\qquad$
$\qquad$

Largest $\qquad$

12 A bag contains only red, green and blue counters.
The table below shows the probability of selecting a counter of each colour.

| Counter <br> Colour | Red | Green | Blue |
| :---: | :---: | :---: | :---: |
| Probability | 0.4 | 0.25 | 0.35 |

12 (a) Write down the counter colour that is most likely to be selected.

Answer

12 (b) Dawn randomly selects a counter from the bag.
The counter that Dawn selected was green.
Dawn puts the green counter back into the bag and then randomly selects another counter.

Tick the correct statement.


The probability that the second counter is green is less than 0.25


The probability that the second counter is green is equal to 0.25


The probability that the second counter is green is greater than 0.25


You cannot work out the probability that the second counter is green

13 (a) Write a number in the box to make the calculation correct.


13 (b) Write a number in the box to make the calculation correct.


14 Draw a triangle onto the square centimetre grid below that is an isosceles triangle and has an area of $20 \mathrm{~cm}^{2}$


15 Usmah shades $\frac{1}{5}$ of rectangle $\mathbf{A}$ and $\frac{1}{4}$ of rectangle $\mathbf{B}$.

Rectangle A


Rectangle B

|  |  |  |  |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

She then joins the two rectangles as shown to make rectangle $\mathbf{C}$.


Rectangle C

|  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Work out the percentage of rectangle $\mathbf{C}$ that is shaded.
$\qquad$
$\qquad$
$\qquad$

16 On Monday, Tuesday and Wednesday and bookshop sold a total of 100 books.
The incomplete pictogram and bar chart below show the number of books sold by a bookshop on Monday, Tuesday and Wednesday.

represents $\qquad$ books


Complete the pictogram and the bar chart.
[4 marks]

17 (a) Solve $4 y+12=60 \quad$ [2 marks] | Do not write |
| :--- |
| outside the |
| box |

Answer

17 (b) Work out the value of $5 m+2 n$ when $m=7$ and $n=-8$
$\qquad$
$\qquad$
$\qquad$

Answer

17 (c) Expand and simplify $7(h+4)-10 h$
$\qquad$
$\qquad$

Answer

17 (d) Ryan's teacher asked him to fully factorise $15 x+30$
Ryan's answer is $5(3 x+6)$
Explain why Ryan's answer is not fully factorised.
$\qquad$
$\qquad$

18 On the grid, draw the graph of $y=3 x-1$ for values of $x$ from to -2 to 3


19 The perimeter of a pentagon is 70 cm
Work out the mean length of the sides of the pentagon.
[2 marks]

Answer

20 Leah spends a total of 3 hours revising for her English and maths exams.
The ratio of the time that she spends revising for her English exam to the time that she spends revising for her maths exam is $2: 7$

Work out how long she spends revising for her maths exam.
Give your answer in hours and minutes.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Answer $\qquad$ hours minutes

21


Triangle $\mathbf{A}$ is reflected in the line $y=5$ to give Triangle $\mathbf{B}$.
Triangle B is then transformed to triangle C.
Describe fully the single transformation that maps Triangle $\mathbf{B}$ to Triangle C.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
22 Here are some fractions

$\frac{1}{3}$
$\frac{1}{4}$

22 (a) Work out the median.

Answer

22 (b) Work out the range.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Answer $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

23 Here is a compound shape.


The area of the compound shape is $93 \mathrm{~cm}^{2}$
Work out the perimeter of the compound shape.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Answer cm

24 The first three terms of a sequence are shown below

$$
8.9 \times 10^{3} \quad 9.3 \times 10^{3} \quad 9.7 \times 10^{3}
$$

Work out the fourth term of the sequence. Give your answer in standard form.
$\qquad$
$\qquad$
$\qquad$

Answer

25 The area of a circle is $36 \pi \mathrm{~cm}^{2}$
Work out the circumference of the circle.
Give your answer in terms of $\pi$.

| 26 | Write down the value of $\sin 90^{\circ}$ | [1 mark] | Do not write outside the box |
| :---: | :---: | :---: | :---: |
|  | Answer |  |  |
| 27 | Simplify $\left(2 k^{5}\right)^{4}$ | [2 marks] |  |

Answer
$28 \quad A B C D E F$ is a hexagon with two lines of symmetry.
The lines of symmetry are shown on the hexagon below.

$A B: B C=3: 1$
Work out the perimeter of the hexagon.

