AQA GCSE Mathematic Non-Calculator 2022 Higher Paper 1 Revision Worksheet

Questions 1–10

1. Work out $-4 \times -\frac{9}{7}$.

Circle your answer.

$-\frac{28}{36}$ $-\frac{28}{9}$ $\frac{28}{36}$ $\frac{28}{9}$

2. Circle the value of $(\sqrt{6})^4$

12 36 10 $\sqrt{24}$

3. $0.203 = \frac{1}{5} + x$

Circle the value of x.

$\frac{1}{300}$ $\frac{1}{3000}$ $\frac{3}{100}$ $\frac{3}{1000}$

4. Circle the correct statement.

$3x \equiv x + 2x$ $3x \equiv 2$ $3x + x \equiv 2 - x$ $3x + x - 2 \equiv 0$

5. Divide 62 in the ratio 3 : 7.

Show your working and state the two parts of the answer.

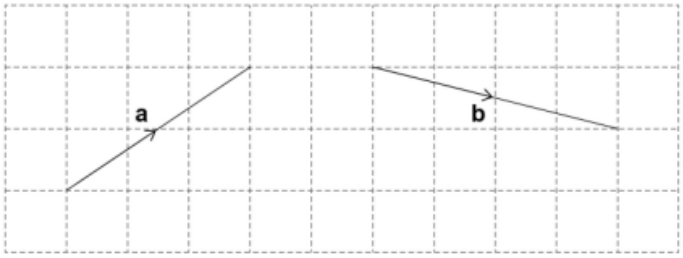
6. Here is some information about the time spent on social media by 40 women and 40 men last week.

Time spent, t (hours)	Number of women	Number of men
$2 < t \leqslant 5$	12	10
$5 < t \leqslant 8$	11	17
$8 < t \leqslant 11$	14	9
$11 < t \leqslant 14$	2	4
$14 < t \leqslant 17$	1	0

Tick one box for each statement:

Statement	Definitely true	Might be true	Cannot be true
Three of the women spent more than 11 hours on social media.	[ ]	[ ]	[ ]
The range for the men is 15 hours.	[ ]	[ ]	[ ]
The women have a higher median than the men.	[ ]	[ ]	[ ]

7. The diagram shows the vectors **a** and **b**.



As a column vector $\mathbf{a} = \begin{pmatrix} 2 \\ 3 \end{pmatrix}$

(a) What is **b** as a column vector?

(b) Work out 4**a** as a column vector.

(c) $\mathbf{a} + \mathbf{c} = \begin{pmatrix} 3 \\ 0 \end{pmatrix}$

Work out **c** as a column vector. Circle your answer.

$\begin{pmatrix} 2 \\ 0 \end{pmatrix}$ $\begin{pmatrix} 0 \\ 2 \end{pmatrix}$ $\begin{pmatrix} -2 \\ 0 \end{pmatrix}$ $\begin{pmatrix} 0 \\ -2 \end{pmatrix}$

8. Work out $\left(\frac{7}{10} - \frac{4}{15}\right) \div \frac{2}{3}$

Give your answer as a fraction.

9. Work out all the **integer** values of x for which $12 \leq 4x < 25$.

10. Here is some information about 120 people who visit a shop.

- $\frac{3}{4}$ of the people buy neither a coat nor a dress.
- 19 people buy a coat.
- 14 people buy a dress.

Complete this Venn diagram to represent the information.

$\xi = 120$ people who visit the shop

C = people who buy a coat

D = people who buy a dress