



CANDIDATE
NAME

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CENTRE
NUMBER

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CANDIDATE
NUMBER

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0607/11

October/November 2023

45 minutes

You will need: Geometrical instruments

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- Calculators must **not** be used in this paper.
- You may use tracing paper.
- You must show all necessary working clearly and you will be given marks for correct methods even if your answer is incorrect.
- All answers should be given in their simplest form.

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [].

This document has 8 pages.

Formula List

Area, A , of triangle, base b , height h . $A = \frac{1}{2}bh$

Area, A , of circle, radius r . $A = \pi r^2$

Circumference, C , of circle, radius r . $C = 2\pi r$

Curved surface area, A , of cylinder of radius r , height h . $A = 2\pi rh$

Curved surface area, A , of cone of radius r , sloping edge l . $A = \pi rl$

Curved surface area, A , of sphere of radius r . $A = 4\pi r^2$

Volume, V , of prism, cross-sectional area A , length l . $V = Al$

Volume, V , of pyramid, base area A , height h . $V = \frac{1}{3}Ah$

Volume, V , of cylinder of radius r , height h . $V = \pi r^2 h$

Volume, V , of cone of radius r , height h . $V = \frac{1}{3}\pi r^2 h$

Volume, V , of sphere of radius r . $V = \frac{4}{3}\pi r^3$

Answer **all** the questions.

- 1 Work out how many days there are in 3 weeks.

..... [1]

- 2 Complete the statement.

For any circle the diameter is $\times$ the radius. [1]

- 3 Write down the value of $\sqrt{81}$.

..... [1]

- 4 The table shows information about 230 goats.

	Adult goats	Kid goats
Male	27	96
Female	23	84

Work out the total number of kid goats.

..... [1]

- 5 A 5-litre container of orange juice is used to fill cups that each hold 200 millilitres.

Work out the maximum number of cups that can be filled.

..... [2]

- 6 Draw an angle of 57° at A .



[1]

- 7 Complete the sequence of the first six triangle numbers.

1, 3, , 10, , 21

[2]

- 8 Write these numbers in order of size, starting with the smallest.

$\frac{3}{4}$ 83% 0.8 0.72

..... < < < [2]
smallest

- 9 E is the point (3, 7) and F is the point (3, 11).

Find the coordinates of the mid-point of EF .

(..... ,) [1]

- 10 Simplify.

$$-8k + 4d - 3d - 6k$$

..... [2]

- 11 Work out 3 hours as a percentage of 15 hours.

..... % [2]

- 12 $f(x) = x^2 - 2$

Work out $f(6)$.

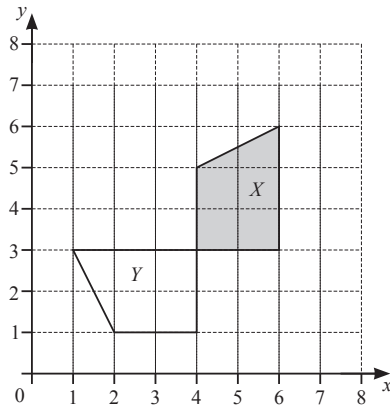
..... [1]

13 Simplify.

$$\frac{2m}{5} \times 3$$

..... [1]

14



Describe fully the **single** transformation that maps shape *X* onto shape *Y*.

.....
 [3]

15 Multiply out.

$$2(5 + 2y)$$

..... [1]

16 A semicircle has diameter 6 m.

Find the arc length of this semicircle.
 Give your answer in terms of π .

..... m [2]

- 17** The angles in any triangle add up to 180° .
The angles in triangle T are in the ratio $3 : 4 : 5$.

Work out the size of each angle in triangle T .

....., [3]

- 18** Solve the simultaneous equations.

$$\begin{aligned}x &= -2y \\ 3x - 2y &= 16\end{aligned}$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots [2]$$

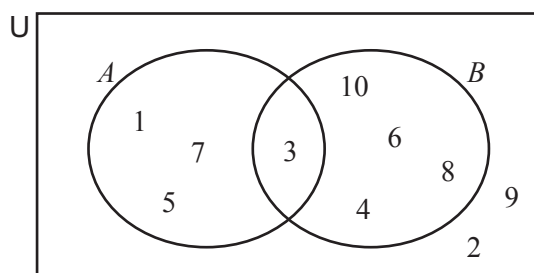
- 19** Work out.

$$(3 \times 10^4) \times (4 \times 10^2)$$

Give your answer in standard form.

..... [2]

20



The Venn diagram shows two sets, A and B .

(a) Write down the elements of set A .

..... [1]

(b) One of the numbers is selected at random.

Find the probability that this number is in both set A and set B .

..... [1]

21 Write down the equation of the line with gradient 1 that passes through $(0, 5)$.

..... [2]

Questions 22 and 23 are printed on the next page.

- 22 The grouped frequency table shows information about the number of hours worked by each of 80 doctors.

Number of hours (t)	Frequency
$10 < t \leq 20$	8
$20 < t \leq 30$	16
$30 < t \leq 40$	21
$40 < t \leq 50$	35

- (a) Write down the class interval containing the median.

..... $< t \leq$ [1]

- (b) Complete the cumulative frequency table.

Number of hours (t)	Cumulative frequency
$t \leq 20$	8
$t \leq 30$	
$t \leq 40$	
$t \leq 50$	

[2]

- 23 These are the first five terms in a sequence.

225 223 221 219 217

Find the n th term.

..... [2]

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