Centre Number	Candidate Number	Candidate Name

NAMIBIA SENIOR SECONDARY CERTIFICATE

MATHEMATICS ORDINARY LEVEL

4324/1

PAPER 1 (Core)

1 hour 15 minutes

Marks 60

2020

Additional Materials: Geometrical instruments
Non-programmable calculator
Tracing paper (optional)

INSTRUCTIONS AND INFORMATION TO CANDIDATES

- Candidates answer on the Question Paper in the spaces provided.
- Write your Centre Number, Candidate Number and Name in the spaces at the top of this page.
- Write in dark blue or black pen.
- You may use a soft pencil for any diagrams or graphs.
- Do not use correction fluid.
- Do not write in the margin *For Examiner's Use*.

- Answer **all** questions.

- If working is needed for any question it must be shown below, or where working is indicated.
- The number of marks is given in brackets [ ] at the end of each question or part question.
- Non-programmable calculators may be used.
- If the degree of accuracy is not specified in the question, and if the answer is not exact, give the answer to **three** significant figures. Give answers for angle sizes to **one** decimal place.
- For π, either use your calculator value, or use 3.142.

For Examiner's Use

Marker	
Checker	

This document consists of **13** printed pages and **3** blank pages.

Republic of Namibia

MINISTRY OF EDUCATION, ARTS AND CULTURE

1 Calculate $\frac{5^2}{2^5}$ giving the answer as a

(a) common fraction,

Answer **(a)** ..... [1]

(b) decimal fraction.

Answer **(b)** ..... [1]

---

2 33 35 37 39

From the list, write down a

(a) prime number,

Answer **(a)** ..... [1]

(b) factor of 396.

Answer **(b)** ..... [1]

---

3 Write 43.4571

(a) to the nearest 10,

Answer **(a)** ..... [1]

(b) correct to two decimal places.

Answer **(b)** ..... [1]

---

4 Write the four values in order of size, smallest first.

$\frac{1}{1000}$, $\frac{11}{1000}$, 0.11%, 0.0108

Answer .....<.....<.....<..... [2]
(smallest)

5 The radius of the Earth is 6.378×10^6 metres.

Write 6.378×10^6 as an ordinary number.

Answer ..... [1]

---

6 The temperature decreases from 26°C to 19°C.

Calculate the percentage decrease in temperature.

Answer ..... % [2]

---

7 A nurse starts work at 17:15 and finishes at 07:10 the next day.
How long is the nurse at work? Give your answer in hours and minutes.

Answer ..... hours..... minutes [2]

---

8 Christine invests N$ 5 600 at a rate of 4.5% per year compound interest.
Calculate the amount she receives at the end of 3 years.

Answer N$ ..... [3]

---

9 The mass, m kilograms, of a hippo is 2 670 kg, correct to the nearest 5 kg.
Complete the statement about m.

Answer .....≤ m <..... [2]

[Turn over

10 A tin of soup has the following information on the label.

400 grams of soup contains		
Proteins	Carbohydrates	Fats
4 g	14 g	5.8 g

(a) Write down the mass of carbohydrates to proteins as a ratio in its simplest form.

Answer ..... : ..... [2]

(b) Calculate the percentage of the soup that is fat.

Answer .....% [2]

---

11 The scale on a map is 1 : 250 000. A road is 6 centimetres long on the map. Calculate the actual length of the road in kilometres.

Answer .....km [2]

---

12 Simplify $(4x^2y^5)^0$.

Answer ..... [1]

---

13 Factorise completely $7a^2 + 28ab$.

Answer ..... [2]

---

14 Find the value of h if $3^9 \div 3^h = 3^5$.

Answer **(a)** h = ... [1]

---

15 Solve the equation

$5x + 1 = -4$.

Answer x = ... [2]

---

16 Solve the simultaneous equations

$3x - 2y = 7$,

$4x + y = 13$.

Answer x = ...and y = ... [3]

---

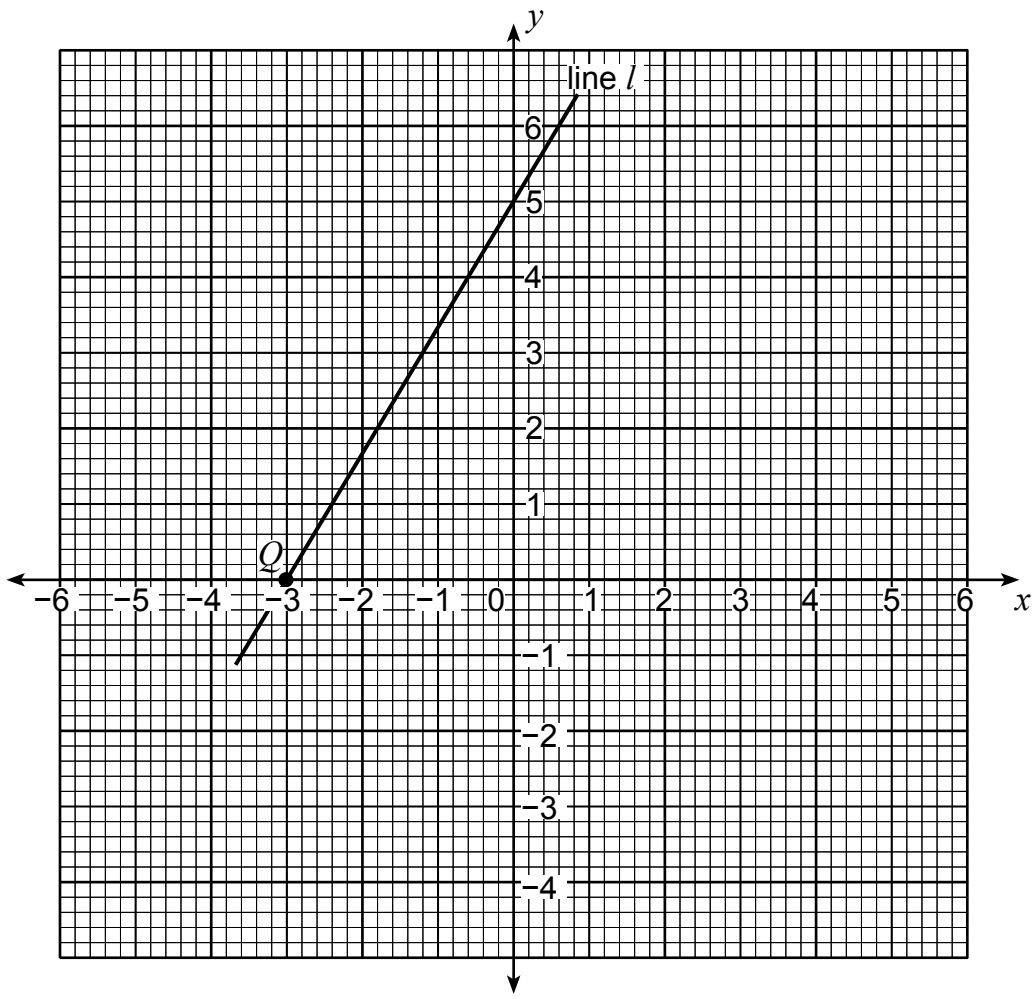
17 Joe thought of a number, x. He multiplied the number by 10 and subtracted 14.

Write down the expression to represent this information.

Answer..... [1]

For Examiner's Use

18 Line l is drawn on the grid.



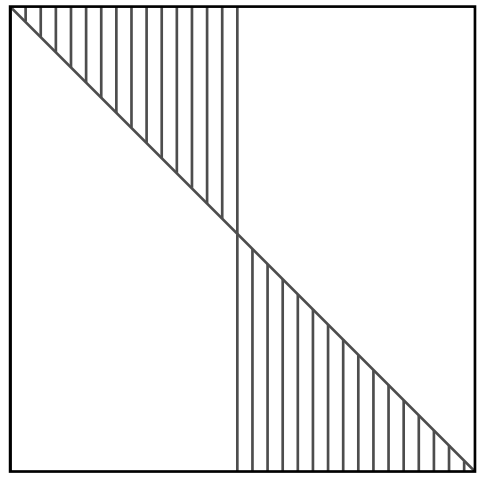
(a) Write down the coordinates of point Q.

Answer **(a)** (..... , ...) [1]

(b) Write down the y-intercept of line l.

Answer **(b)** ..... [1]

19



Write down the order of rotational symmetry of the diagram above.

Answer ..... [1]

---

20 It is given that $\mathbf{q} = \begin{pmatrix} -3 \\ 5 \end{pmatrix}$ and $\mathbf{r} = \begin{pmatrix} 4 \\ 8 \end{pmatrix}$.

Find

(a) $\mathbf{q} + \mathbf{r}$,

Answer **(a)** $\begin{pmatrix} \quad \\ \quad \end{pmatrix}$ [1]

(b) $\frac{1}{2}\mathbf{r}$.

Answer **(b)** $\begin{pmatrix} \quad \\ \quad \end{pmatrix}$ [1]

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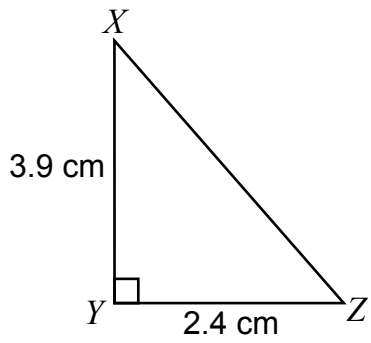
21 Triangle XYZ is a right angled triangle with XY = 3.9 cm and YZ = 2.4 cm.



NOT TO SCALE

Calculate angle YXZ.

Answer.....° [2]

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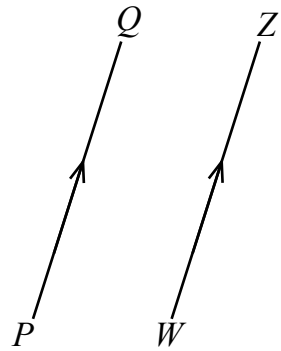
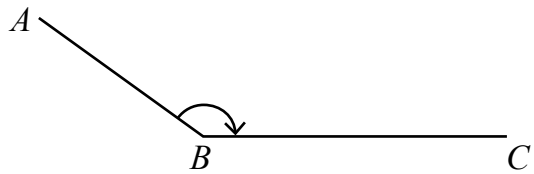
22 Complete the statement with the correct mathematical term.

(a)



Line PQ is ..... to line WZ. [1]

(b)



The indicated angle ABC is an ..... angle. [1]

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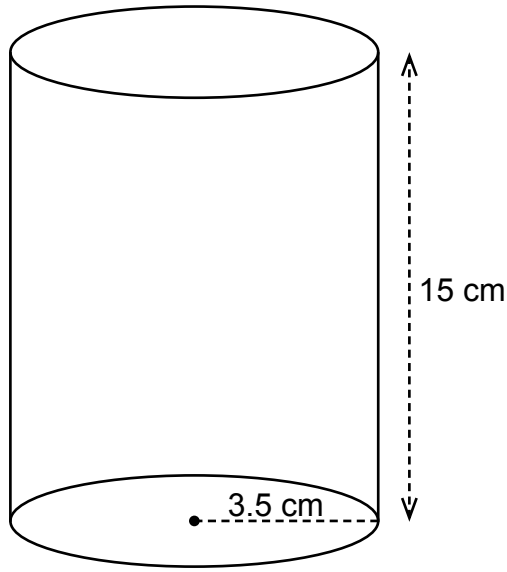
23 A cylindrical tin has a radius of 3.5 cm and a height of 15 cm.

NOT TO SCALE



Calculate the volume of the tin.

Answer ..... cm^3 [2]

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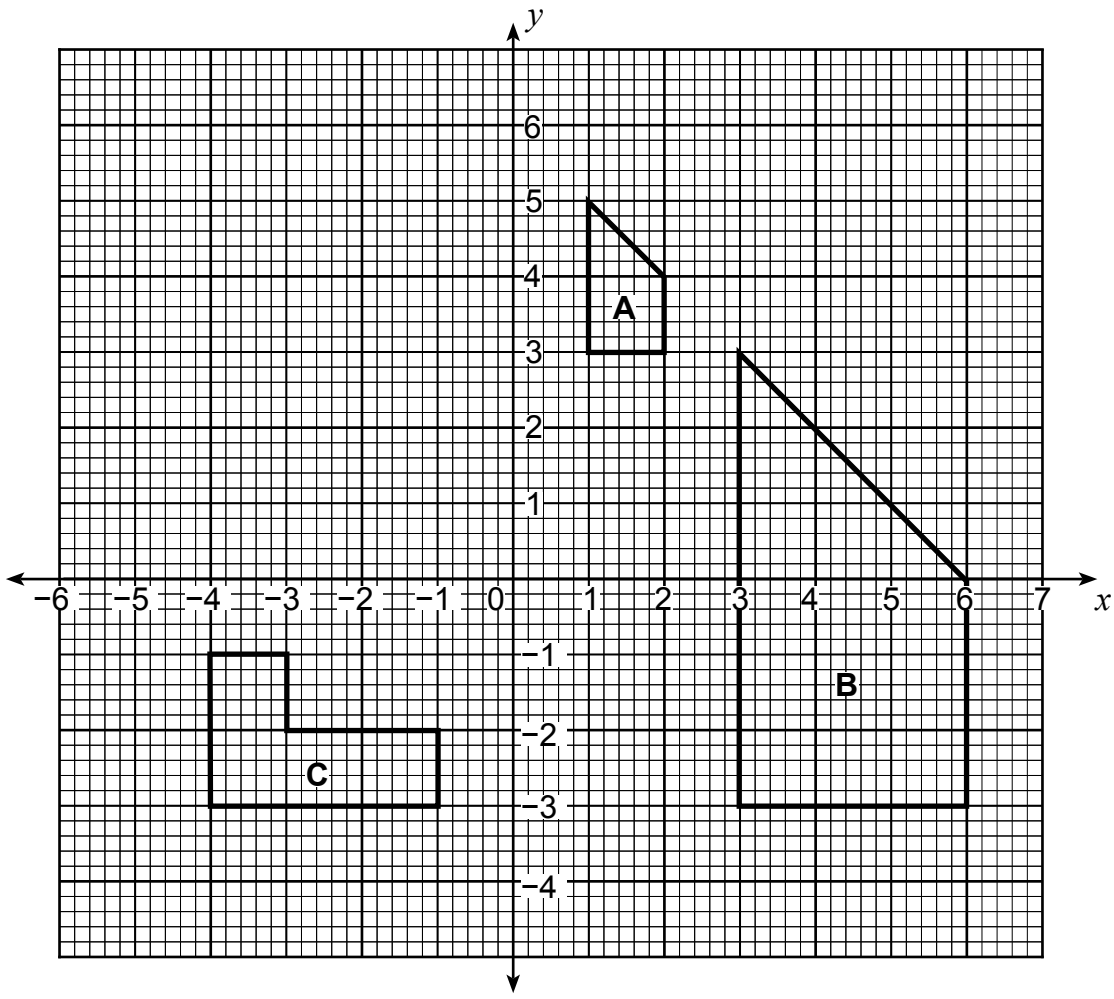
24 Shapes **A**, **B** and **C** are shown on the grid.



(a) Describe fully the single transformation that maps **A** onto **B**.

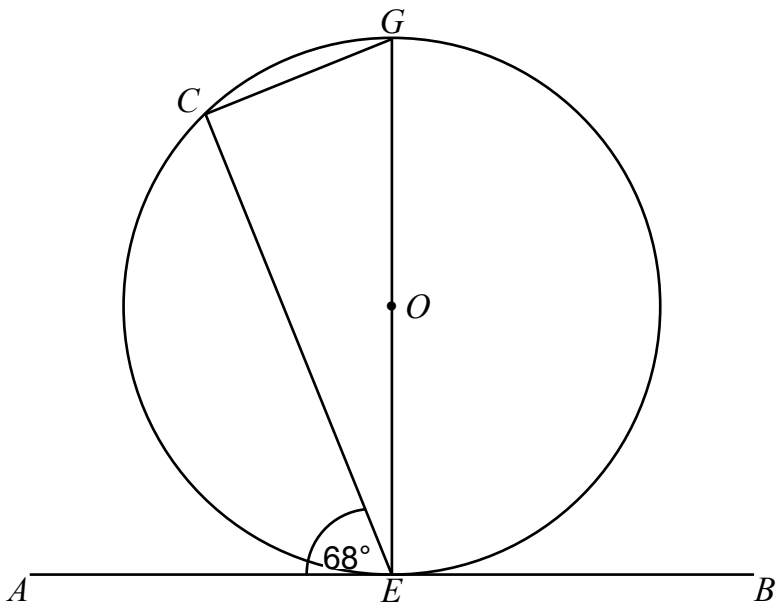
Answer **(a)**.....

..... [2]

(b) On the grid above, draw the reflection of **C** in the line $y = 1$ and label it **D**. [2]

For Examiner's Use

25 C, G and E are points on the circle, centre O. The line EOG is a diameter, angle CEA = 68° and AB is a tangent to the circle at E.



NOT TO SCALE

(a) Write down the size of angle ECG.

Answer **(a)** .....° [1]

(b) Find angle EGC

Answer **(b)** .....° [1]

---

26 Anne either walks or cycles to school. The probability that she cycles to school is 0.2.

(a) Write down the probability that Anne walks to school.

Answer **(a)** ..... [1]

(b) There are 195 school days in a year.
Work out the expected number of days that Anne cycles to school in a year.

Answer **(b)** .....days [1]

27 The table shows different methods of travel used by 45 learners to travel to school.

Method of travel	Walk	Bus	Cycle
Number of learners	20	18	7

This information can be displayed in a pie chart.
Calculate the sector angle for learners who travel by bus.

Answer .....° [2]

---

28 The heights of six boys are displayed below.

1.54 m, 1.49 m, 1.60 m, 1.64 m, 1.90 m and 1.43 m.

Calculate the mean height of the six boys.

Answer..... m [2]

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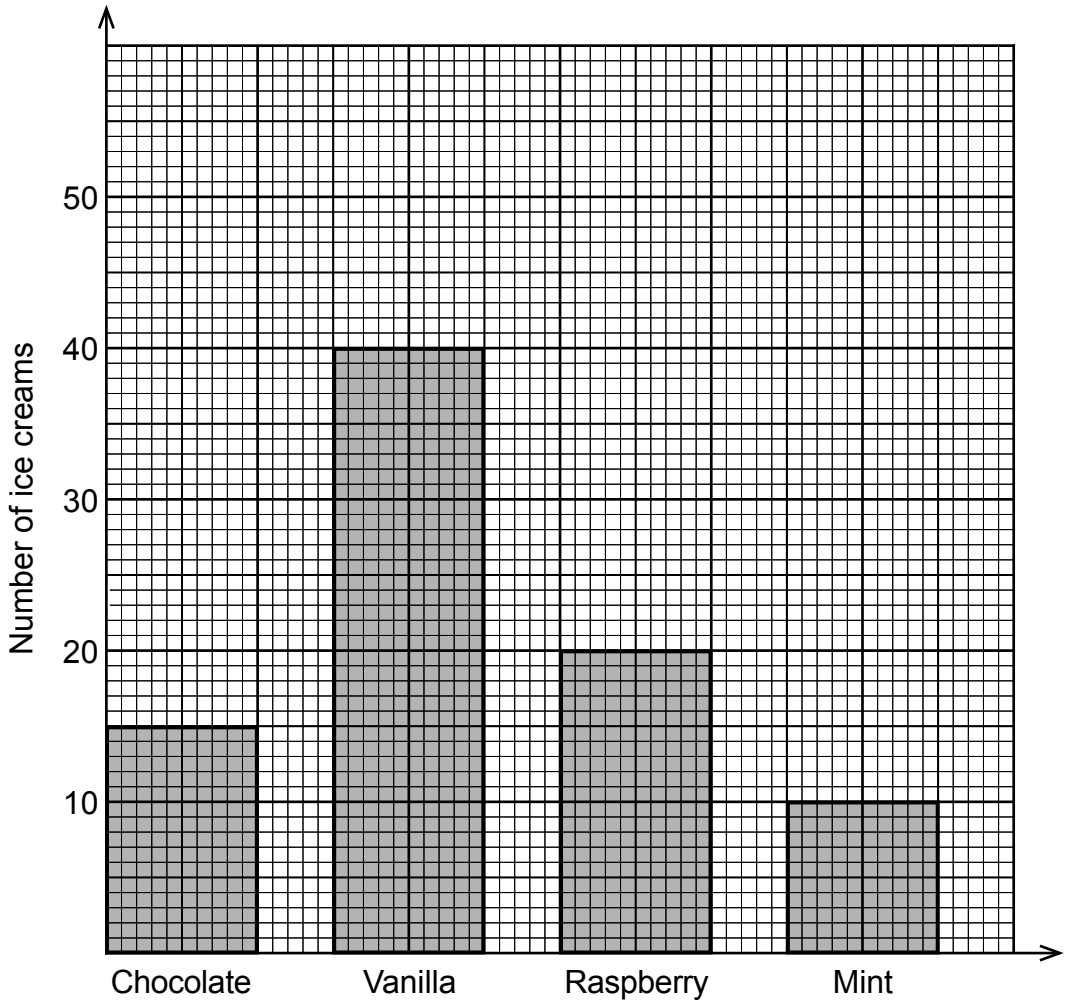
29 The bar chart shows the number of ice creams sold on a certain Saturday. There are four different flavours.



(a) Which ice cream flavour is the most popular?

Answer **(a)** ..... [1]

(b) Work out the total number of ice creams sold on this Saturday.

Answer **(b)** ..... [2]

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