Centre Number	Candidate Number	Candidate Name

NAMIBIA SENIOR SECONDARY CERTIFICATE

MATHEMATICS ORDINARY LEVEL 4324/1

PAPER 1 (Core) 1 hour 15 minutes

Marks 60 **2018**

Additional Material: Non-programmable calculator

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 **10** printed pages and **2** blank pages.

Republic of Namibia

MINISTRY OF EDUCATION, ARTS AND CULTURE

For Examiner's Use

1 Work out $\sqrt[3]{27} + 12^2$.

Answer ..... [1]

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2 1, –18, – 4, 7, $\sqrt{14}$, $\sqrt{16}$

From the list of numbers, write down

(a) the smallest integer,

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

(b) the value of 7^0,

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

(c) an irrational number.

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

---

3 Complete the following table.

Fraction	Decimal	Percentage
$\frac{5}{8}$	**(a)**	62.5%
(b)	0.15	15%
$\frac{9}{200}$	0.045	**(c)** .....

[3]

---

4 Evaluate 2^{-4} and write your answer as a fraction.

Answer ..... [1]

---

5 Find the value of xy if $y = 5$ and $x = -3$.

Answer ..... [1]

For Examiner's Use

6

From the set of triangles given, choose **two** that are congruent.

Answer ..... and ..... [1]

---

7 Write the following numbers in descending order, biggest first.

$0.3142, \quad 0.6^2, \quad \frac{34}{100}$

Answer ..... > ..... > ..... [2]

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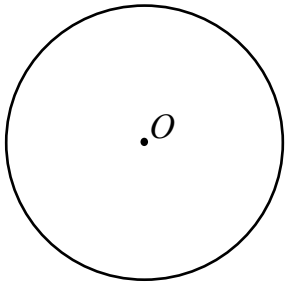
8 The diagram shows a circle with centre O.



Draw a diameter on the circle and label it AB. [1]

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9 Gisela recorded a temperature of – 2°C on Monday. By Tuesday, the temperature had gone down by 3°C.

(a) Find the temperature on Tuesday.

Answer **(a)**..... °C [1]

(b) On Wednesday the temperature was – 1°C.

Find the change in temperature between Tuesday and Wednesday.

Answer **(b)** ..... °C [1]

For Examiner's Use

10 Nadia's salary in 2016 was N$110 000 per year. In 2017, her salary was increased to N$115 500 per year.

(a) By how much did Nadia's salary increase from 2016 to 2017?

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

(b) Calculate the percentage increase of her salary from 2016 to 2017.

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

---

11 Vectors $\mathbf{a}$, $\mathbf{b}$, and $\mathbf{c}$ are such that $\mathbf{a} = \begin{pmatrix} 3 \\ 4 \end{pmatrix}$, $\mathbf{b} = \begin{pmatrix} -2 \\ 1 \end{pmatrix}$ and $\mathbf{c} = \begin{pmatrix} 3 \\ -2 \end{pmatrix}$.

Calculate

(a) $2\mathbf{c}$.

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

(b) $\mathbf{a} + \mathbf{b}$

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

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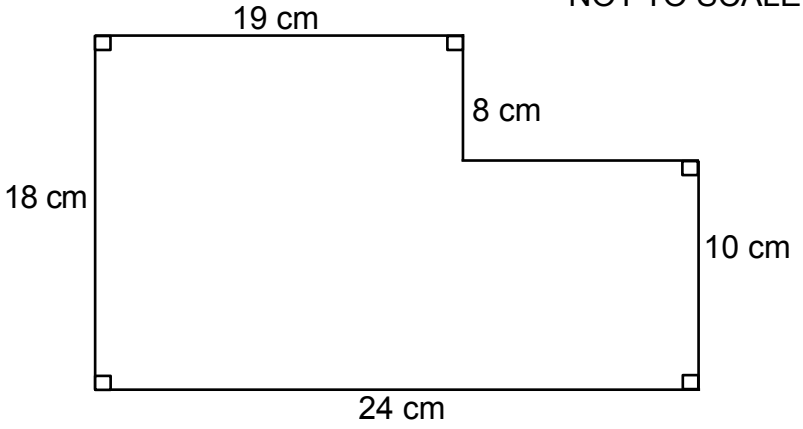
12 The diagram shows the floor plan of a laboratory.

NOT TO SCALE



Calculate the perimeter of the floor.

Answer ..... cm [2]

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13 Mike bought a laptop with a marked price of N$6 750 on a hire purchase. He paid a deposit of 35% of the marked price.

(a) Calculate his deposit amount.

Answer **(a)** N$ ..... [2]

(b) He then makes 12 monthly payments of N$400 per month.

Calculate the total amount he paid for the laptop.

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

---

14 Sweets cost 30 cents each.

Write down an expression for the price, in cents, of x sweets.

1 sweet = 30 cents

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

---

15 Roy is 16 years old and Susan is 14 years old. Their uncle gave them money to share in the ratio of their ages. Susan received N$112.

Calculate the amount Roy received.

Answer N$ ..... [2]

---

16 Factorise completely $9a^2b + 3ab$.

Answer ..... [2]

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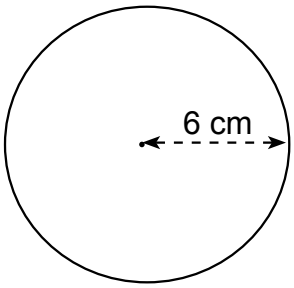
17 The contents of a packet of crisps have a mass of 28 grams.
The packet contains 35 crisps.

Calculate the mass of one crisp.

Answer ..... g [2]

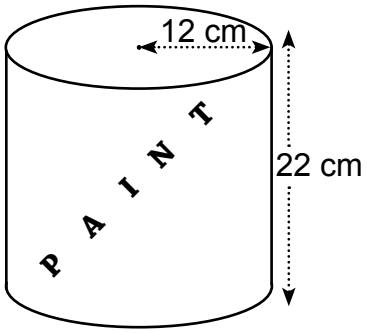
18 **(a)** Calculate the circumference of a circle with a radius of 6 cm.



Answer **(a)** ..... cm [2]

(b) The diagram shows a cylindrical paint tin with a radius of 12 cm and a height of 22 cm.

NOT TO SCALE



Calculate the volume of paint in the tin when it is full.

Answer **(b)** ..... cm^3 [2]

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19 In May 2017, one Namibian dollar (N$) was worth 0.75 Botswana pula (BP). Jomo changed N$7 500 into pula.

How much did he receive in pula?

Answer BP ..... [2]

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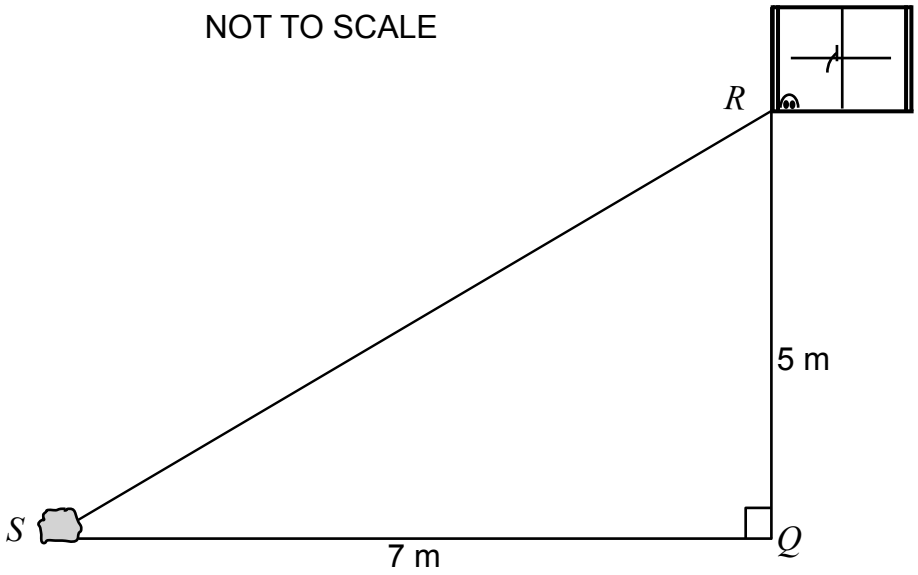
20 Robert is looking at a stone, S, on the ground from an upstairs window at R.

NOT TO SCALE



(a) Using Pythagoras' theorem, calculate the length of RS.

Answer **(a)** ..... m [2]

(b) Calculate the angle of depression of the stone from Robert.

Answer **(b)** .....° [2]

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21 A straight line has the equation $y = 3x + 7$.

(a) Write down the gradient of the line.

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

(b) Make x the subject of the formula in $y = 3x + 7$.

Answer **(b)** $x =$ ..... [2]

---

22 Seven people were asked to guess the number of sweets in a bottle.

Their guesses were

250, 192, 210, 187, 238, 214, 192.

(a) Write down the mode.

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

(b) Find the median.

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

(c) Calculate the mean.

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

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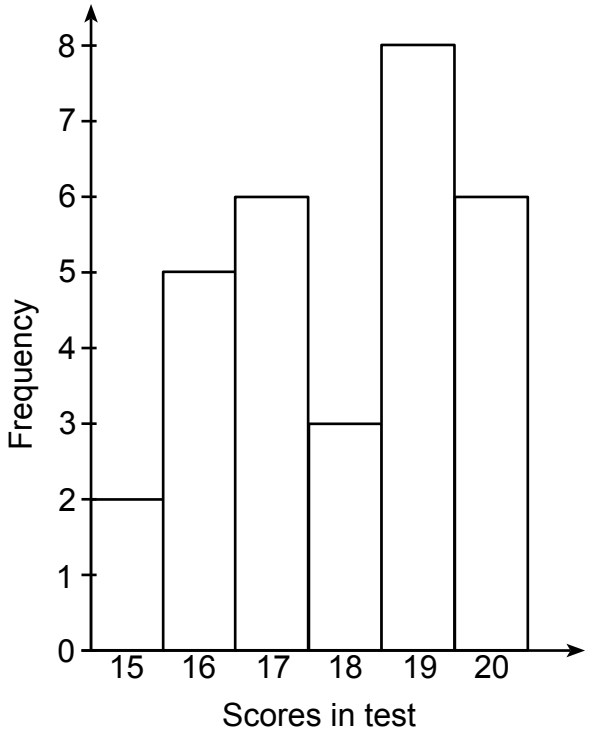
23 The bar chart shows the results of a test taken by 30 students.



(a) Write down the range.

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

(b) How many students scored 16 marks?

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

(c) Use the bar chart to complete the frequency table.

Test scores	15	16	17	18	19	20
Frequency			6			6

[2]

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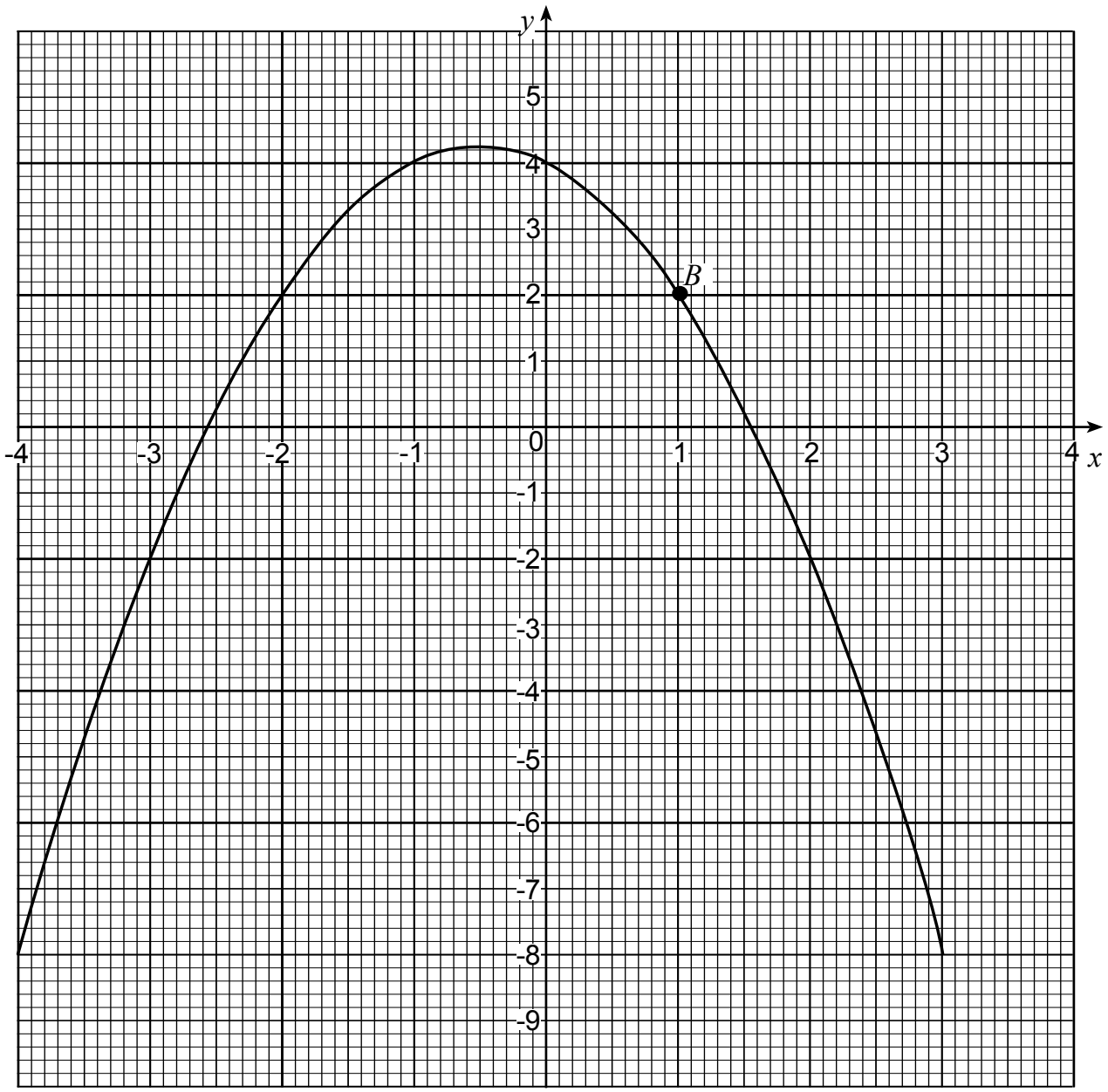
24 The diagram shows the graph of $y = 4 - x - x^2$ for $-4 \leq x \leq 3$.



(a) Write down the coordinates of point B indicated on the graph.

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

(b) Use the graph to find

(i) the value of y when $x = -1.4$,

Answer **(b) (i)** y = ... [1]

(ii) the two values of x when $4 - x - x^2 = -2$.

Answer **(b) (ii)** x = ... or x =..... [2]

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