



EXAMINATIONS COUNCIL OF ESWATINI
Eswatini General Certificate of Secondary Education

CANDIDATE
NAME

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CENTRE
NUMBER

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CANDIDATE
NUMBER

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MATHEMATICS

6880/01

Paper 1 Non-Calculator Short Answer Questions (Core and Extended)

October/November 2019

Candidates answer on the Question Paper.

1 hour 30 minutes

Additional Materials: Geometrical instruments
Tracing paper (optional)

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces provided.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams or graphs.

Do not use staples, paper clips, highlighters, glue or correction fluid.
You are **not** allowed to use a calculator.

Answer **all** questions.

If working is needed for any question, it must be shown below that question.
The number of marks is given in brackets [] at the end of each question or part question.

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.
The total of the marks for this paper is 60.

For Examiner's Use	
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This document consists of 11 printed pages and 1 blank page.

1 (a) Write in numerals

One million, sixty thousand, four hundred and five.

Answer (a) [1]

(b) Work out $12 + 48 \div 6$

Answer (b) [1]

2 Round off**(a)** 47268.39 to the nearest 10,

Answer (a) [1]

(b) 3852 to the nearest 20.

Answer (b) [1]

3 Simo woke up at 10.25 pm.

He stayed awake for 2 hours 35 minutes and then went back to sleep.

At what time did Simo go back to sleep? Give your answer in 24-hour clock time.

Answer [2]

- 4 A survey was carried out to establish the highest education level among 100 people.

The lowest education level was SPC.

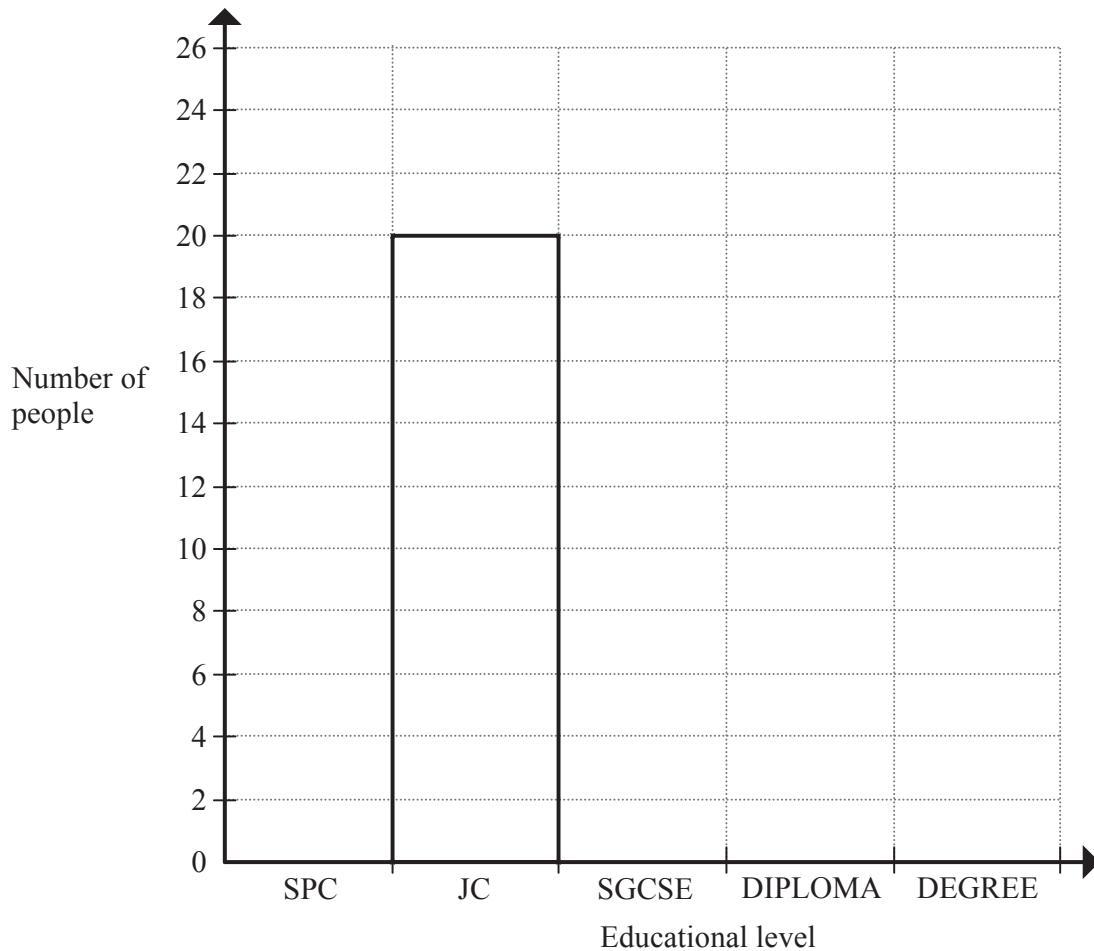
The following record was made.

<i>Educational level</i>	SPC	JC	SGCSE	DIPLOMA	DEGREE
<i>Number of people</i>	13	20	25	d	18

- (a) Work out the value of d , the number of Diploma holders.

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

- (b) Use the information above to complete the bar chart below.



[3]

5 Given that $\mathbf{p} = \begin{pmatrix} -3 \\ 2 \end{pmatrix}$ and $\mathbf{q} = \begin{pmatrix} 5 \\ -4 \end{pmatrix}$

Work out.

(a) $2\mathbf{p} + \mathbf{q}$

Answer (a) $\begin{pmatrix} \\ \end{pmatrix}$ [2]

(b) $\mathbf{q} - \mathbf{p}$

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

6 The table below shows the cost of petrol in Swaziland in March 2016.

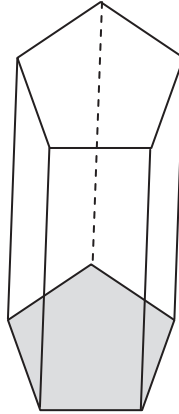
<i>Number of litres of petrol</i>	2	3	7.5	y
<i>Cost in Emalangeni</i>	22.60	33.90	x	124.30

Find the values of x and y

Answer $x = \dots\dots\dots$ [1]

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

- 7 (a) (i) Name the solid represented below.

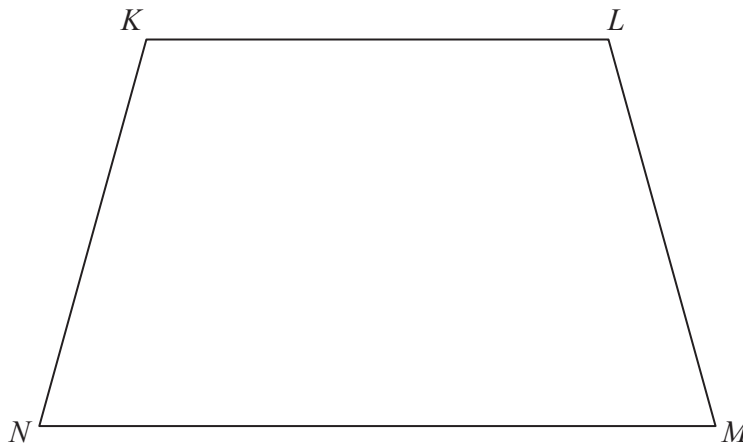


Answer (a)(i) [1]

- (ii) State the number of edges on the solid.

Answer (a)(ii) [1]

- (b) The diagram shows quadrilateral $KLMN$.



On the diagram, using a straight edge and a pair of compasses, construct the

- (i) perpendicular bisector of line KL , [2]
(ii) bisector of angle KNM . [2]
(c) On the diagram in (b), label the point of intersection of the two loci as X. [1]

8 (a) Find the value of $(2^3)^2$

Answer (a) [1]

(b) Work out $\frac{2.8}{0.014}$

Answer (b) [2]

9 (a) You are given the following flow diagram for a mapping.



Write the mapping in the form $f(x) = \dots\dots\dots$

Answer (a) $f(x) = \dots\dots\dots$ [1]

(b) $g(x) = \frac{x}{5} + 7$.

Find $g^{-1}(x)$.

Answer (b) $g^{-1}(x) \dots\dots\dots$ [3]

10 In a class there are 32 boys and 24 girls.

Express the ratio of boys to girls in its simplest form.

Answer : [2]

11 Write these fractions in order of size, starting with the largest.

$$\frac{1}{2}, \quad \frac{5}{6}, \quad \frac{3}{5}, \quad \frac{7}{30}, \quad \frac{2}{3}$$

Answer,,,, [2]
largest

12 Thoko recorded the number of eggs her hens had laid.

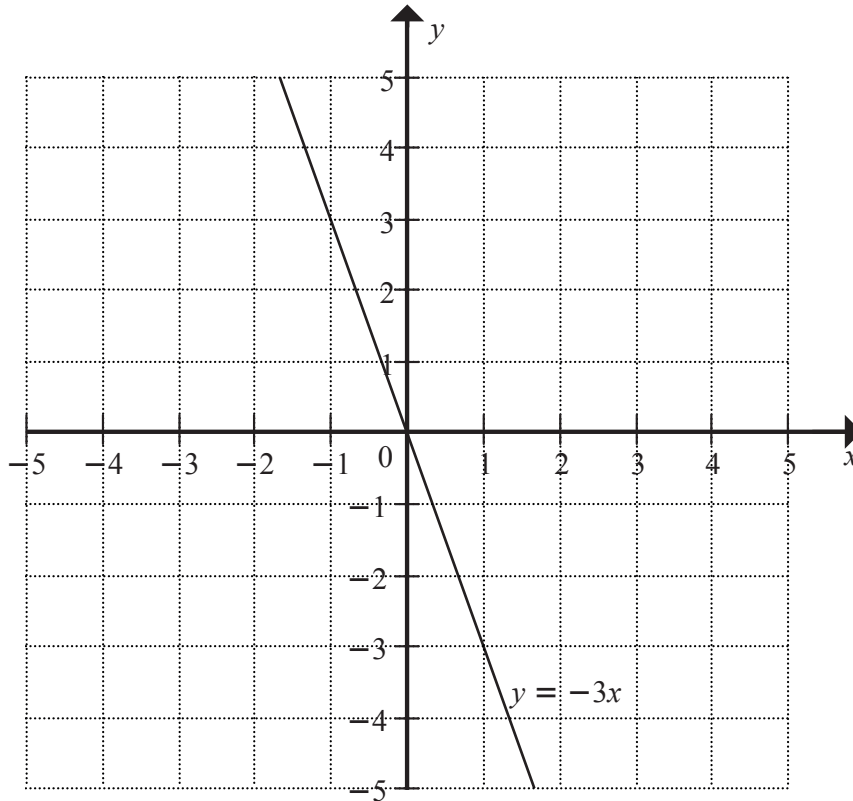
She found the following number of eggs in each nest.

12 9 12 15 10 14 12

Calculate the mean number of eggs per nest.

Answer [2]

- 13 The diagram shows the graph of $y = -3x$.



- (a) On the same grid, draw and label the graph of $y - x = 4$ for $-5 \leq x \leq 1$. [2]
- (b) Hence, solve the simultaneous equations.

$$y = -3x$$

$$y - x = 4.$$

Answer $x = \dots\dots\dots$

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

14 A trader bought a box of weaves for E7200.

In the box there were 120 packets of weaves.

(a) Calculate the cost of each packet of weaves.

Answer (a) E [2]

(b) The trader sold each packet of weaves for E110.

Calculate the percentage profit made on each packet.

Answer (b) % [3]

15 Senzo bought 15 apples.

Musa bought p fewer apples than Senzo.

(a) Write an expression for the total number of apples bought by the two boys.

Answer (a) [2]

(b) The total number of apples bought was 25.

Find the value of p .

Answer (b) [1]

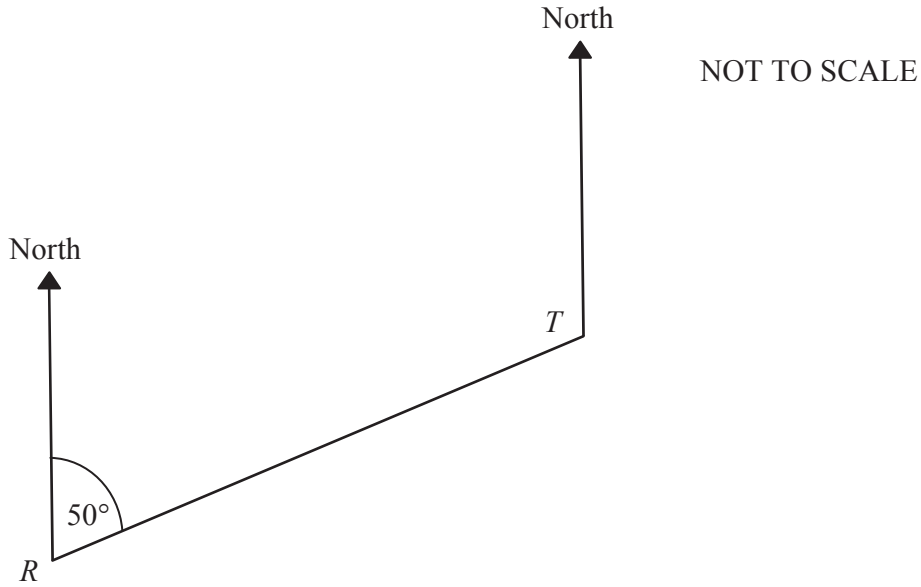
16 (a) You are given that Port *M* is due West of Port *N*.

Write down the bearing of Port *N* from Port *M*.

Answer (a) ° [1]

(b) The diagram shows two ports *R* and *T*.

Port *T* is on a bearing of 050° from Port *R*.



Calculate the bearing of Port *R* from Port *T*.

Answer (b) ° [2]

17 (a) You are given the function $f(x) = -2x$.

Find the range for the function given the domain

$$\{-1, 1, 3, 5\}.$$

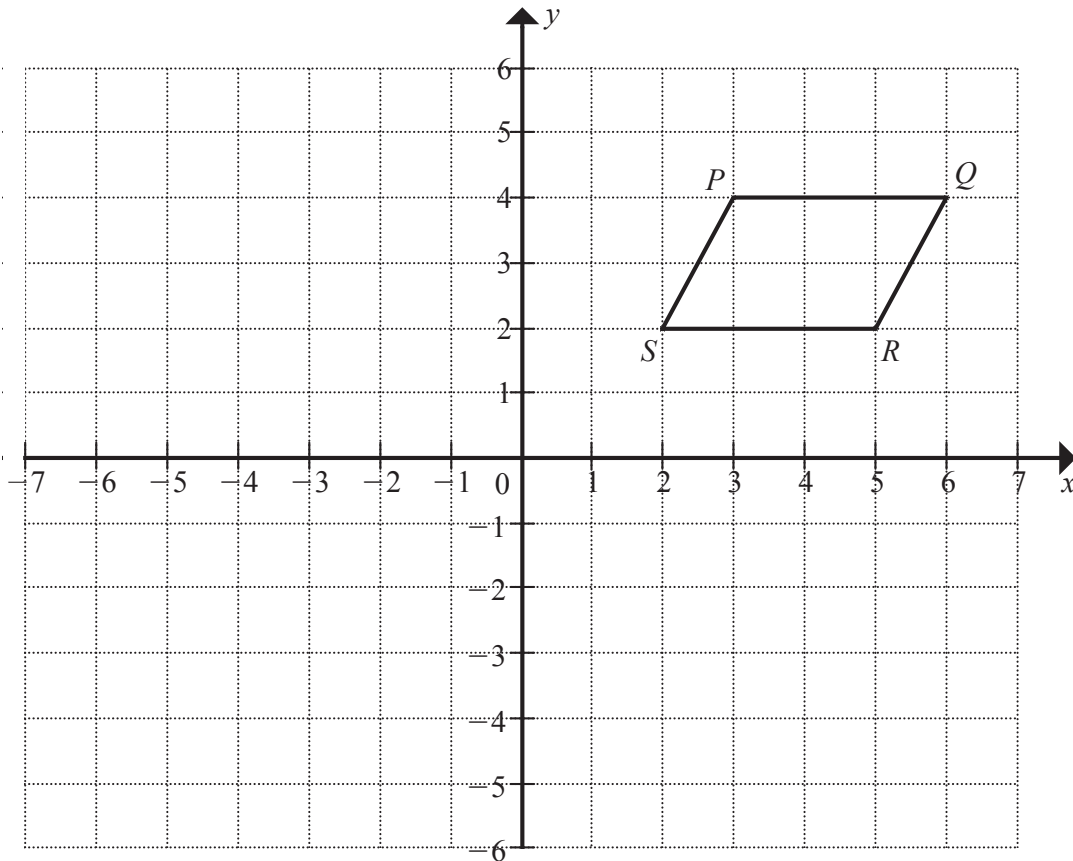
Answer (a) [2]

(b) Factorise the expression:

$$x^2 - x - 56$$

Answer (b) [2]

18 The parallelogram $PQRS$ is drawn on the grid below.



(a) Reflect $PQRS$ in the line $x = 0$.

Draw and label the image $P_1Q_1R_1S_1$. [3]

(b) Rotate $PQRS$ about $(0, 0)$ through 180° .

Draw and label the image $P_2Q_2R_2S_2$. [3]

