STADIRA TRAINING INSTITUTE

MATHEMATICS PRACTICE PAPERS

Candidate name	
Centre number	Candidate number

MATHEMATICS

0580/01

Paper 1 (Core)

Mock Set 6

1 hour 30 minutes

INSTRUCTIONS

- 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 staples, paper clips, correction fluid or correction tape.
- You must NOT use a calculator.

INFORMATION

- The total mark for this paper is 80.
- The number of marks for each question or part question is shown in brackets [ ].
- You must show all necessary working clearly.

This is a Stadira Training Institute practice paper. It is not a past paper and is not endorsed by Cambridge Assessment International Education. It was written by teachers with more than 15 years teaching the Cambridge IGCSE curriculum.

1

(a) From the list below, write down the number that is a multiple of 9.

14 27 32 40

[1]

(b) From the same list, write down the number that is a cube number.

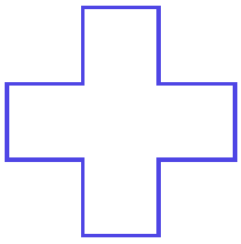
[1]

(c) Work out -6 + 11 - 4 .

[1]

2

The diagram shows a shape drawn on a grid.



(a) Draw all the lines of symmetry on the shape.

[2]

(b) Write down the order of rotational symmetry of the shape.

[1]

3

A cuboid measures 3 cm by 2 cm by 1 cm.

(a) On the centimetre grid, draw an accurate net of this cuboid.



[3]

(b) Write down the number of faces of the cuboid.

[1]

4

Amogelang measures the length of a table as 180 cm.

The true length is 174 cm.

(a) Work out the error in her measurement.

Answer ..... cm [1]

(b) Work out the percentage error.

Give your answer correct to 1 decimal place.

Answer ..... % [3]

5

360 people were asked to name their favourite fruit.

The results are shown in the pie chart angles below.

fruit	mango	orange	apple	banana
angle	140	100	80	40

(a) Work out how many people chose mango.

[2]

(b) Write the number who chose banana as a fraction of the total.

Give your answer in its simplest form.

[2]

6

Work out, giving each answer in its simplest form.

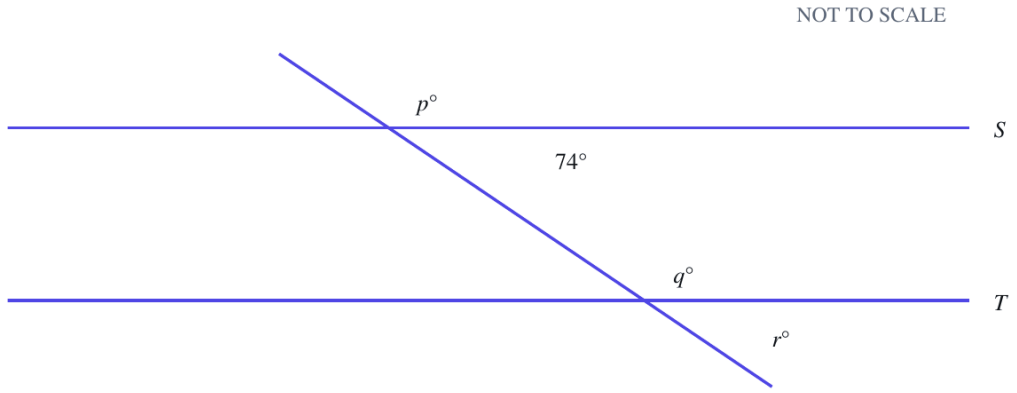
(a) $\frac{4}{5} - \frac{3}{10}$

[2]

(b) $\frac{9}{14} \times \frac{7}{12}$

[2]

7



Lines *S* and *T* are parallel. A straight line crosses them.

(a) Find *p*.

[1]

(b) Find q.

Give a reason for your answer.

[2]

(c) Find r.

[1]

8

A shop sells phone credit.

Airtime of P50 is sold for P54.

(a) Work out the profit as a percentage of P50 .

Answer ..... % [2]

(b) The shop wants a profit of 12% instead.

Work out the selling price for airtime of P50 .

[2]

9

Simplify.

(a) $7c + 4d - 9c - d$

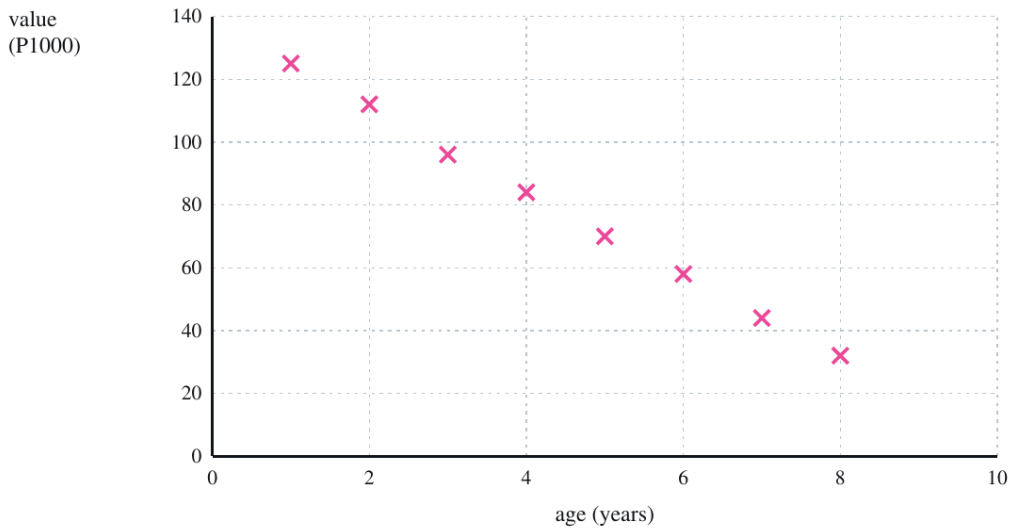
[2]

(b) $3e \times 5e^2$

[2]

10

The scatter diagram shows the age and value of 8 second-hand cars.



(a) Describe the correlation shown.

[1]

(b) Estimate the value of a car that is 4.5 years old.

[1]

11

A rectangle has area 84 cm^2 and width 7 cm.

(a) Work out the length of the rectangle.

Answer ..... cm [2]

(b) Work out the perimeter of the rectangle.

Answer ..... cm [2]

12

Solve.

(a) $9 - x = 2x$

[2]

(b) $5(x + 2) = 45$

[2]

13

Two ordinary dice are rolled and the scores are added.

(a) Write down the number of possible outcomes.

[1]

(b) Find the probability that the total is 4.

[2]

14

The nth term of a sequence is $3n + 5$.

(a) Work out the 20th term.

[1]

(b) A term of this sequence is 68.

Work out the position of this term.

[2]

15

The diagram shows a triangular prism of length 12 cm.

The cross-section is a right-angled triangle with base 5 cm and height 4 cm.

(a) Work out the area of the triangular cross-section.

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

(b) Work out the volume of the prism.

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

16

Using compasses and a ruler only, construct the bisector of angle *ABC*.

Leave in your construction arcs.



[2]

17

(a) Expand.

$4y(3 - 2y)$

[2]

(b) Factorise.

$6m + 15$

[1]

18

The list shows the number of goals scored by a team in 9 matches.

1 3 0 2 5 1 2 4 1

(a) Write down the mode.

[1]

(b) Work out the median.

[2]

(c) Work out the mean.

[2]

19

P is the point (-2, 5) and *Q* is the point (6, 1).

(a) Write down the coordinates of the midpoint of *PQ*.

Answer (..... , ...) [2]

(b) Work out the gradient of *PQ*.

[2]

20

Bokang changes P4500 into rand.

The exchange rate is 1 pula = 1.28 rand.

(a) Work out how many rand he receives.

Answer ..... rand [2]

(b) He later changes 640 rand back into pula at the same rate.

Work out how many pula he receives.

[2]

21

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

$\frac{2}{5}$ 0.35 38%

[2]

22

(a) Write 4500 in standard form.

[1]

(b) Write 3.2×10^{-3} as an ordinary number.

[1]

23

A helicopter flies from *H* to *K* on a bearing of 145°.

Work out the bearing of *H* from *K*.

Answer ..... ° [2]

24

A map has a scale of 1 : 20 000 .

A footpath is 4.5 cm long on the map.

Work out the real length of the footpath in metres.

Answer ..... m [2]

END OF PAPER