

Silver Level

Question Paper 21

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Difficulty Level	Silver
Booklet	Question Paper 21

Time Allowed: 58 minutes

Score: /48

Percentage: /100

Grade Boundaries:

9	8	7	6	5	4	3	2	1
>90%	80%	70%	60%	50%	40%	30%	20%	<20%

1 The table gives the surface areas, in square kilometres, of five seas.

Sea	Surface area in square kilometres
Mediterranean Sea	2.97×10^6
East China Sea	1.25×10^6
Baltic Sea	4.22×10^5
Red Sea	4.38×10^5
Okhotsk Sea	1.59×10^6

(a) Write 1.59×10^6 as an ordinary number.

.....
(1)

(b) Work out the difference, in square kilometres, between the largest surface area and the smallest surface area for these five seas.
Give your answer in standard form.

..... km²
(2)

The surface area of the East China Sea is k times the surface area of the Baltic Sea.

(c) Work out the value of k .
Give your answer to the nearest whole number.

$k =$
(2)

2

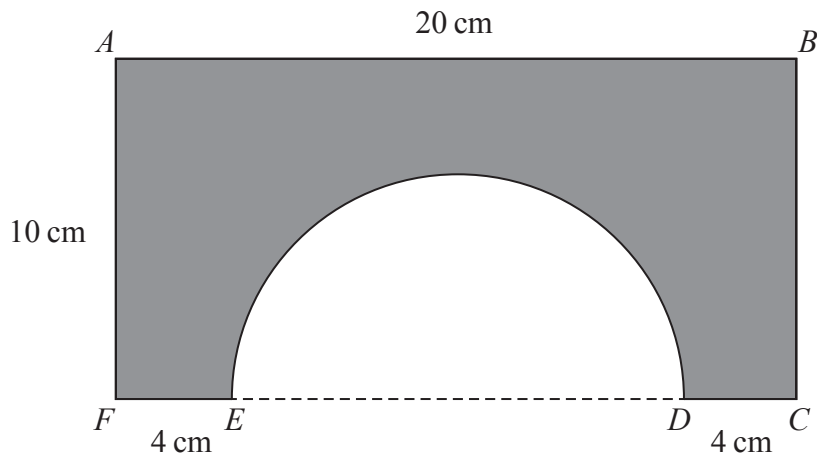


Diagram **NOT** accurately drawn

The shaded shape is made by cutting a semicircle from a rectangular piece of card, $ABCF$, as shown in the diagram.

$FEDC$ is a straight line.

The centre of the semicircle lies on ED .

$AF = BC = 10$ cm, $AB = 20$ cm, $FE = DC = 4$ cm.

Work out the perimeter of the shaded shape.

Give your answer correct to 3 significant figures.

..... cm

(Total for Question 2 is 3 marks)

- 3 Use algebra to show that the recurring decimal $0.2\dot{6} = \frac{4}{15}$

(Total for Question 3 is 2 marks)

- 4 Q is inversely proportional to t^2
 $Q = 320$ when $t = 0.5$

Find a formula for Q in terms of t

(Total for Question 4 is 3 marks)

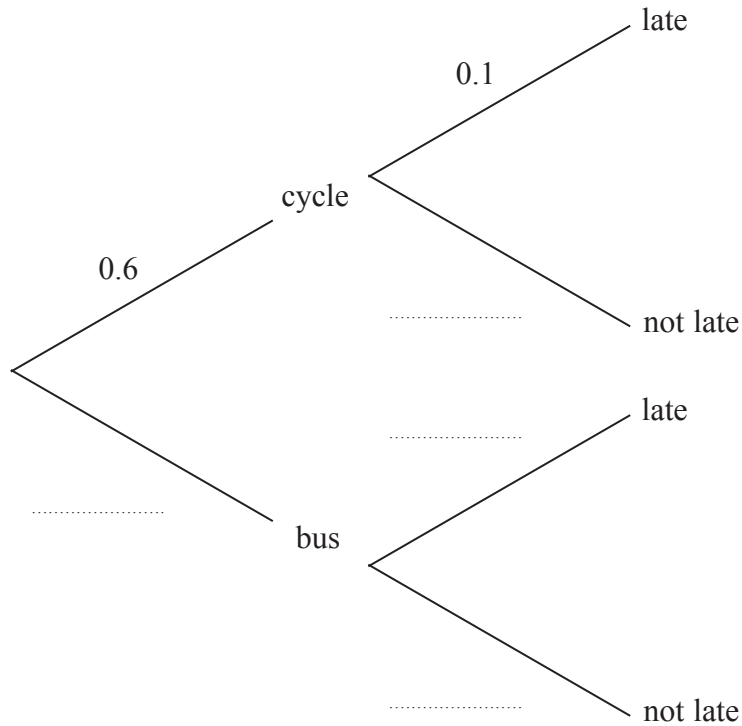
5 Chaiwat either cycles to work or goes by bus.

On any day that he goes to work, the probability that he cycles is 0.6

When he cycles, the probability that he is late is 0.1

When he goes by bus, the probability that he is late is 0.3

(a) Complete the probability tree diagram.



(2)

(b) Calculate the probability that on a day Chaiwat goes to work, he cycles and is late for work.

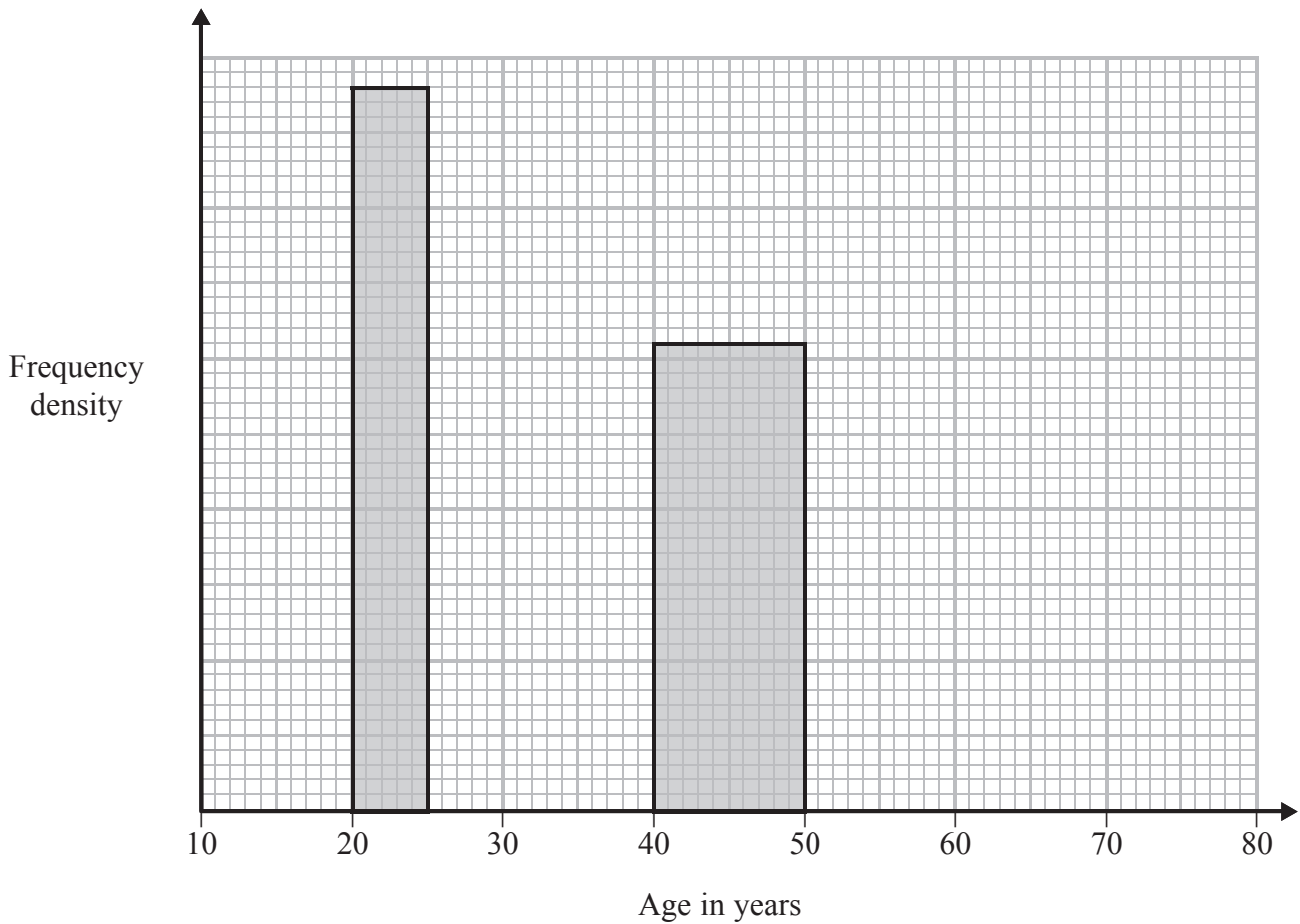
.....
(2)

(c) Calculate the probability that on a day Chaiwat goes to work, he is **not** late for work.

.....
(3)

(Total for Question 5 is 7 marks)

- 6 The incomplete histogram and the incomplete table show information about the ages of people watching a film in a cinema.



Age (a years)	Number of people
$10 \leq a < 20$	38
$20 \leq a < 25$	24
$25 \leq a < 40$	63
$40 \leq a < 50$	
$50 \leq a < 80$	24

- (a) Use the histogram to complete the table.

(2)

- (b) Use the table to complete the histogram.

(2)

(Total for Question 6 is 4 marks)

7 Express $\frac{3}{x+2} - \frac{6}{2x+5}$ as a single fraction.

Simplify your answer.

.....

(Total for Question 7 is 3 marks)

8 ABC is a triangle.

$$AB = 12 \text{ cm}$$

$$AC = 14 \text{ cm}$$

The area of triangle ABC is 72 cm^2

Find, in degrees, the two possible sizes of angle BAC .

Give your answers correct to the nearest degree.

.....

(Total for Question 8 is 4 marks)

9 $a = -5$
 $c = -2$

(a) Work out the value of $2a^2 + 6c$

.....
(2)

There are 4 pens in a small box of pens.
There are 10 pens in a large box of pens.

Ami buys x small boxes of pens and y large boxes of pens.
She buys a total of T pens.

(b) Write down a formula for T in terms of x and y .

.....
(3)

(Total for Question 9 is 5 marks)

10 Bhavin, Max and Imran share 6000 rupees in the ratios 2 : 3 : 7

Imran then gives $\frac{3}{5}$ of his share of the money to Bhavin.

What percentage of the 6000 rupees does Bhavin now have?

Give your answer correct to the nearest whole number.

..... %

(Total for Question 10 is 5 marks)

11 The diagram shows a circle inside a rectangle.

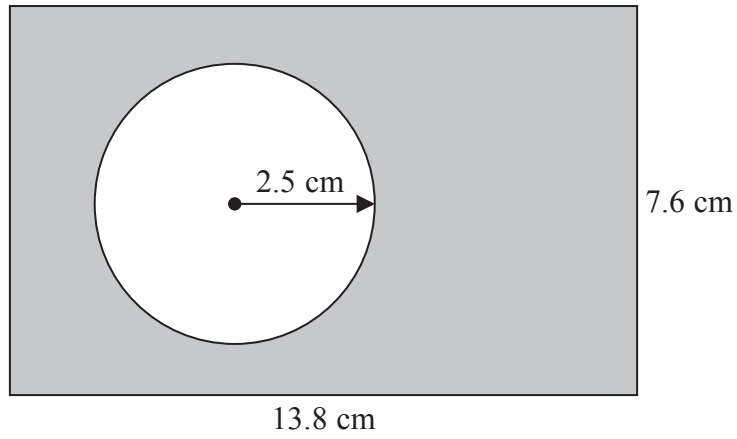


Diagram **NOT** accurately drawn

Work out the area of the shaded region.
Give your answer correct to 3 significant figures.

..... cm²

(Total for Question 11 is 3 marks)

12 Solve the simultaneous equations

$$4x + 5y = 13$$

$$3x - 2y = 27$$

Show clear algebraic working.

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

$$y = \dots\dots\dots$$

(Total for Question 12 is 4 marks)