

Silver Level

Question Paper 8

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Difficulty Level	Silver
Booklet	Question Paper 8

Time Allowed: 60 minutes

Score: /50

Percentage: /100

Grade Boundaries:

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

1

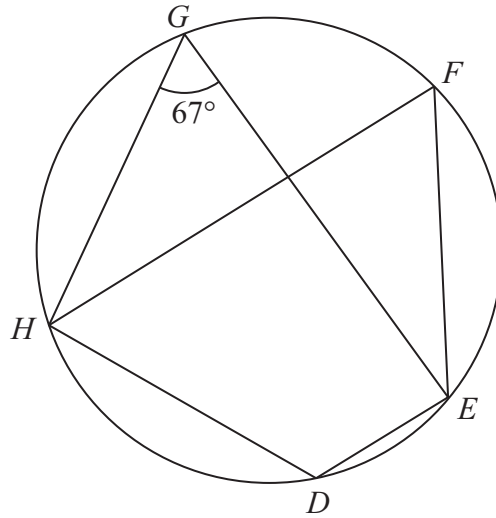


Diagram **NOT** accurately drawn

D, E, F, G and H are points on a circle.
Angle $EGH = 67^\circ$

(a) Find the size of angle EFH .

.....
.....
(1)

(b) (i) Find the size of angle EDH .

.....
.....

(ii) Give a reason for your answer.

.....
.....
(2)

(Total for Question 1 is 3 marks)

2

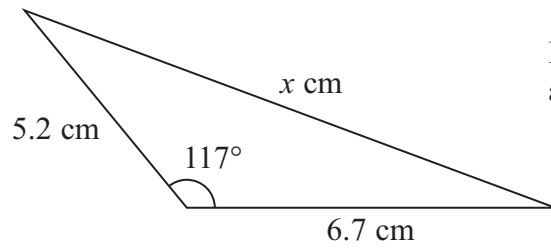


Diagram **NOT**
accurately drawn

Calculate the value of x .
Give your answer correct to 3 significant figures.

$x = \dots\dots\dots$

(Total for Question 2 is 3 marks)

- 3 A garage tests cars for faults.
There are three types of fault – braking, steering and lighting.
A car fails the test if it has one or more of these three types of fault.

Last week, 11 cars had braking faults
9 cars had steering faults
7 cars had lighting faults
no car had both steering faults and lighting faults
2 cars had both braking faults and steering faults
3 cars had both braking faults and lighting faults.

By drawing a Venn Diagram, or otherwise, find the number of cars which failed the test last week.

4

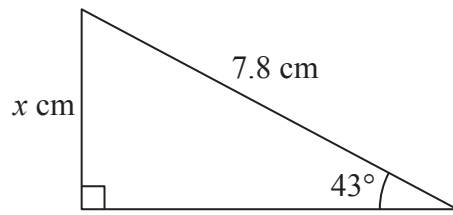


Diagram **NOT**
accurately drawn

Work out the value of x .
Give your answer correct to 3 significant figures.

$x =$

(Total for Question 4 is 3 marks)

5 (a) Write $2^3 \times 2^4$ as a single power of 2

.....
(1)

(b) $280 = 2^n \times 5 \times 7$

Find the value of n .

$n =$
(2)

(Total for Question 5 is 3 marks)

6

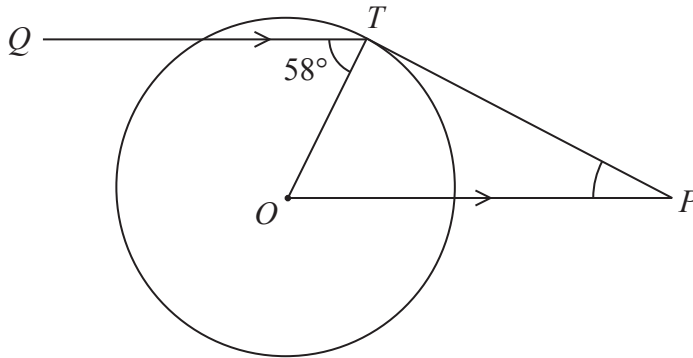


Diagram **NOT**
accurately drawn

T is a point on a circle, centre O .

Q is a point such that angle $QTO = 58^\circ$

P is the point such that OP is parallel to QT and PT is a tangent to the circle.

Work out the size of angle OPT .

o

.....
(Total for Question 6 is 3 marks)

7 Solve $\frac{6x-1}{4} - \frac{5-2x}{2} = 1$

Show clear algebraic working.

$x = \dots\dots\dots$

(Total for Question 7 is 4 marks)

8

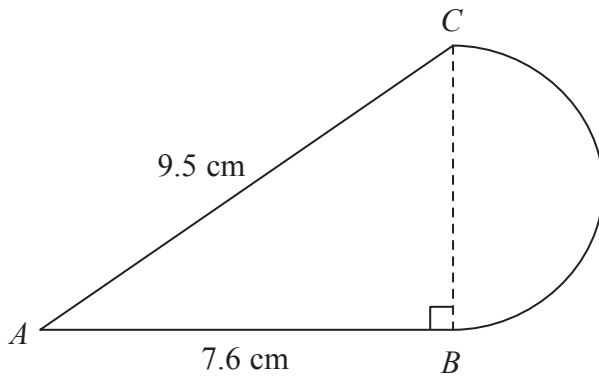


Diagram **NOT**
accurately drawn

The diagram shows a shape made from triangle ABC and a semicircle with diameter BC .
Triangle ABC is right-angled at B .
 $AB = 7.6$ cm and $AC = 9.5$ cm.

Calculate the area of the shape.
Give your answer correct to 3 significant figures.

..... cm²

(Total for Question 8 is 5 marks)

9

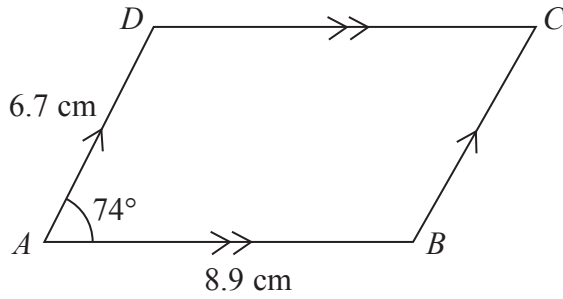


Diagram **NOT** accurately drawn

ABCD is a parallelogram.

$AB = 8.9$ cm.

$AD = 6.7$ cm.

Angle $BAD = 74^\circ$

Calculate the area of parallelogram *ABCD*.

Give your answer correct to 3 significant figures.

..... cm²

(Total for Question 9 is 3 marks)

10 Factorise completely $(12x - y)^2 - (4x - 3y)^2$

.....
(Total for Question 10 is 2 marks)

- 11 (a) Dilip buys a painting for \$ 675
Later, he sells it and makes a percentage profit of 12%.
Work out the price for which Dilip sells the painting.

\$
(3)

- (b) Renuka sells her car.
She makes a loss of \$ 2162
Her percentage loss is 23%.
Work out the price for which Renuka sells her car.

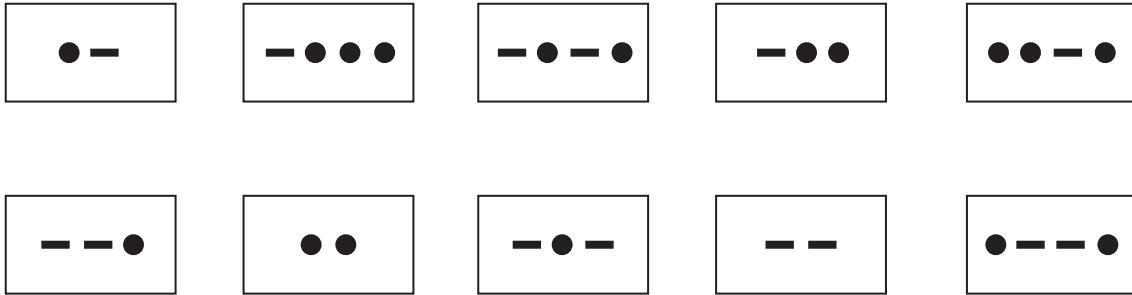
\$
(3)

- (c) Lin bought a computer that had a value of \$ 1500
At the end of each year, the value of her computer had depreciated by 40% of its
value at the start of that year.
Calculate the value of her computer at the end of 3 years.

\$
(3)

(Total for Question 11 is 9 marks)

12 Morse Code uses dots (●) and dashes (—) to represent each letter of the alphabet. Here are 10 cards. Each card has the Morse Code for a letter on it.



(a) Kelly takes at random one of the cards.

Find the probability that she takes a card with 2 dots or a card with 3 dots.

.....
(2)

(b) Hashim has the 10 cards. He takes at random a card 200 times. He replaces the card each time.

Work out an estimate for the number of times he will take a card with exactly 2 dots.

.....
(2)

(c) Shani takes at random two of the 10 cards without replacement.

Calculate the probability that

(i) there is exactly 1 dot on each card she takes,

.....

(ii) there is a total of 4 dots on the two cards she takes.

.....
(5)

(Total for Question 12 is 9 marks)
