

# Silver Level

## Question Paper 12

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Difficulty Level	Silver
Booklet	Question Paper 12

**Time Allowed:** 54 minutes

**Score:** /45

**Percentage:** /100

**Grade Boundaries:**

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

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- 1 Kim bought 12 boxes of drinks.  
He paid \$15 for each box.  
There were 12 drinks in each box.

Kim sold  $\frac{3}{4}$  of the drinks for \$1.50 each.

He sold all of the other drinks at a reduced price.

He made an overall profit of 15%.

Work out how much Kim sold each reduced price drink for.

\$ .....

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**(Total for Question 1 is 5 marks)**

2 Reeta has a biased dice.

Each time Reeta rolls the dice, the probability that she will get a six is 0.1

(a) Write down the probability that she will not get a six.

.....  
(1)

Reeta rolls the dice 50 times.

(b) Work out an estimate for the number of times that she will get a six.

.....  
(2)

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**(Total for Question 2 is 3 marks)**

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3 (a) Write 252 as a product of its prime factors.

.....  
(2)

Given that  $240 = 2^4 \times 3 \times 5$

and that  $y = 240 \times 252$

(b) write  $y$  as a product of powers of its prime factors.

.....  
(2)

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**(Total for Question 3 is 4 marks)**

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- 4 The diagram shows a parallelogram  $ABCD$ .  
In the diagram, all the angles are in degrees.

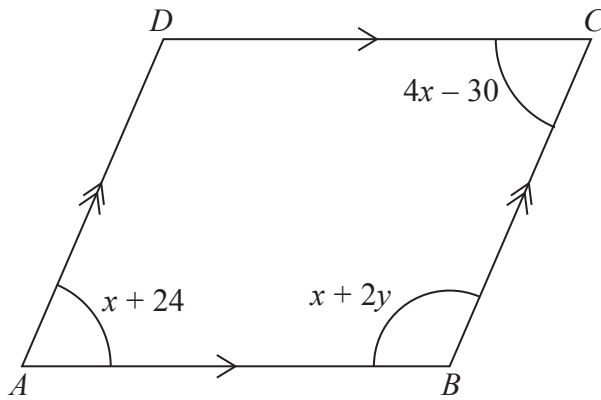


Diagram **NOT**  
accurately drawn

Work out the value of  $x$  and the value of  $y$ .

$x = \dots\dots\dots$

$y = \dots\dots\dots$

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(Total for Question 4 is 4 marks)

5 Mortar mix is made by mixing cement, sand and quicklime in the ratio 1 : 2 : 3

(a) Work out the volume of sand needed to make  $2.1 \text{ m}^3$  of mortar mix.

.....  $\text{m}^3$   
(2)

Julie has  $0.75 \text{ m}^3$  of quicklime.

She has plenty of sand and cement.

(b) Work out the greatest volume of mortar mix she could make.

.....  $\text{m}^3$   
(2)

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**(Total for Question 5 is 4 marks)**

6  $a, b, c$  and  $d$  are four integers.

Their mean is 8

Their mode is 7

Their median is 7.5

(a) Find the value of the largest of the four integers.

.....  
(2)

(b) Find the mean value of the numbers  $(2a - 3)$ ,  $(2b - 3)$ ,  $(2c - 3)$  and  $(2d - 3)$ .

.....  
(2)

---

**(Total for Question 6 is 4 marks)**

7 (a) Factorise  $2t^2 - 7t + 3$

.....  
(2)

(b) Rearrange the formula  $y = a - bx^2$  to make  $x$  the subject.

$x =$  .....  
(3)

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**(Total for Question 7 is 5 marks)**

8 Here are the points that Carmelo scored in his last 11 basketball games.

23 20 14 23 17 24 24 18 16 22 21

(a) Find the interquartile range of these points.

.....  
(3)

Kobe also plays basketball.

The median number of points Kobe has scored in his games is 18.5

The interquartile range of these points is 10

(b) Which of Carmelo or Kobe is the more consistent points scorer?

Give a reason for your answer.

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

---

**(Total for Question 8 is 4 marks)**



- 9 Rob is making a scale model of the Solar System on the school field.  
He wants the distance from the Sun to Jupiter to be 8 metres on his scale model.

The real distance from the Sun to Jupiter is  $7.8 \times 10^8$  kilometres.

- (a) Find the scale of the model.  
Give your answer in the form 1:  $n$ , where  $n$  is written in standard form.

1: .....  
(3)

Rob wants to put the position of a space probe on the scale model.  
The real distance of the space probe from the Sun is  $1.9 \times 10^{10}$  kilometres, correct to 2 significant figures.

- (b) Work out the maximum distance of the space probe from the Sun on the scale model.  
Give your answer in metres.

..... m  
(3)

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**(Total for Question 9 is 6 marks)**

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**10** Eloy's height was 125 cm when his age was 7 years.  
His height was 153 cm when his age was 12 years.

(a) Work out the percentage increase in Eloy's height between the ages of 7 and 12 years.

..... %  
(3)

Eloy's height at the age of 12 years was 85% of his height at the age of 20 years.

(b) Work out Eloy's height when his age was 20 years.

..... cm  
(3)

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(Total for Question 10 is 6 marks)