



# WEEK 3 TASKS

Remember that you will have one paper in which you cannot use a calculator and two papers where a calculator is allowed. It is important that you are comfortable with using a calculator and know when it is appropriate to do so.

Don't forget to take your calculator to the calculator exams and don't forget to actually use it!

## **WEEK 3 TASK 1**

# One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Write down two factors of 15

6

Change 1.5 kilometres to metres

2

Write brackets ( ) in this statement  
to make it correct

$$8 \times 4 + 6 = 38$$

7

Write the number two million in figures

3

Work out  $31.7 \times 100$

8

Write 15% as a decimal

4

Write 4.666 correct to the  
nearest whole number

9

Simplify  $3e - e + 4e$

5

Write in order of size. Start with  
the smallest number

1.02    0.12    1.20    0.21

10

Write 1476 to the nearest 10



## **WEEK 3 TASK 2**

**Estimated completion time = 30 minutes.**

**Answer all questions.**

**Write your answers in the spaces provided.**

**You must write down all the stages in your working.**

**1**    (a) Work out  $\frac{9.8 + 6.8}{4.2 \times 2.1}$

Give your answer as a decimal.

Write down all the figures on your calculator display.

.....  
(2)

(b) Write your answer to part (a) correct to 2 decimal places.

.....  
(1)

**(Total for Question 1 is 3 marks)**

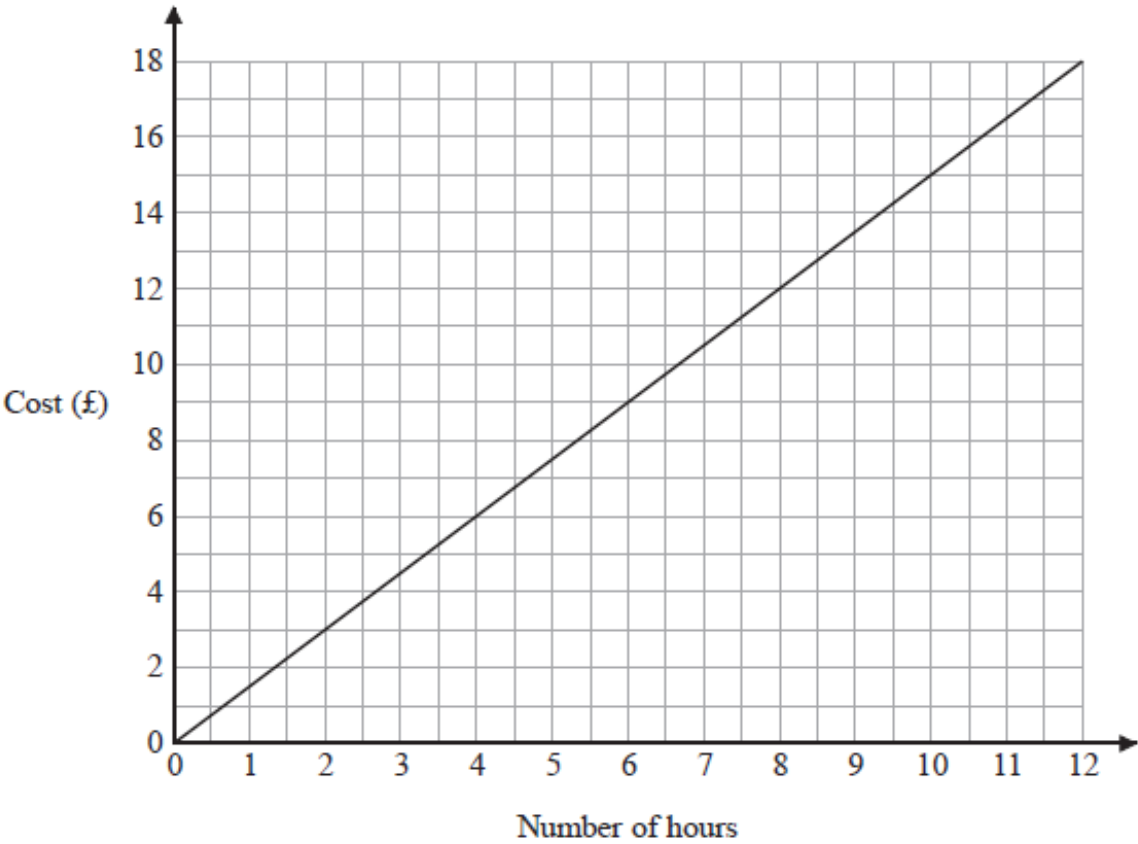
**2**    The table shows information about the weights of the people in a hotel lift.

Weight	Number of people
40 kg	1
50 kg	2
60 kg	4
70 kg	5
80 kg	3
90 kg	1

Show that the total weight of the people in the lift is less than 1200 kg.

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

3 This graph can be used to find the cost of parking a car in a car park for up to 12 hours.



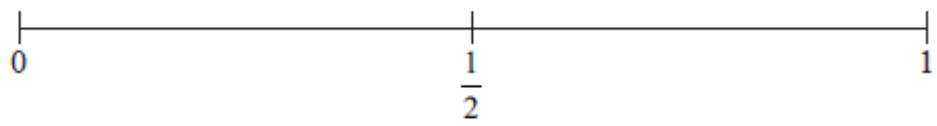
Justin drives into the car park at 08 00 in the morning.  
When he drives out of the car park he has to pay £9  
At what time does Justin drive out of the car park?

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

\*4 Work out the value of  $\frac{25-\sqrt{43.87}}{6+2.1^2}$   
Write down all the figures on your calculator display.

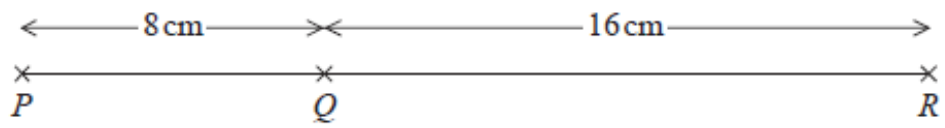
.....  
(Total for Question 4 is 2 marks)

- 5 Shari has a fair ordinary dice.  
 She rolls the dice once.  
 On the probability scale, mark with a cross (×) the probability that Shari gets the number 7



(Total for Question 5 is 1 mark)

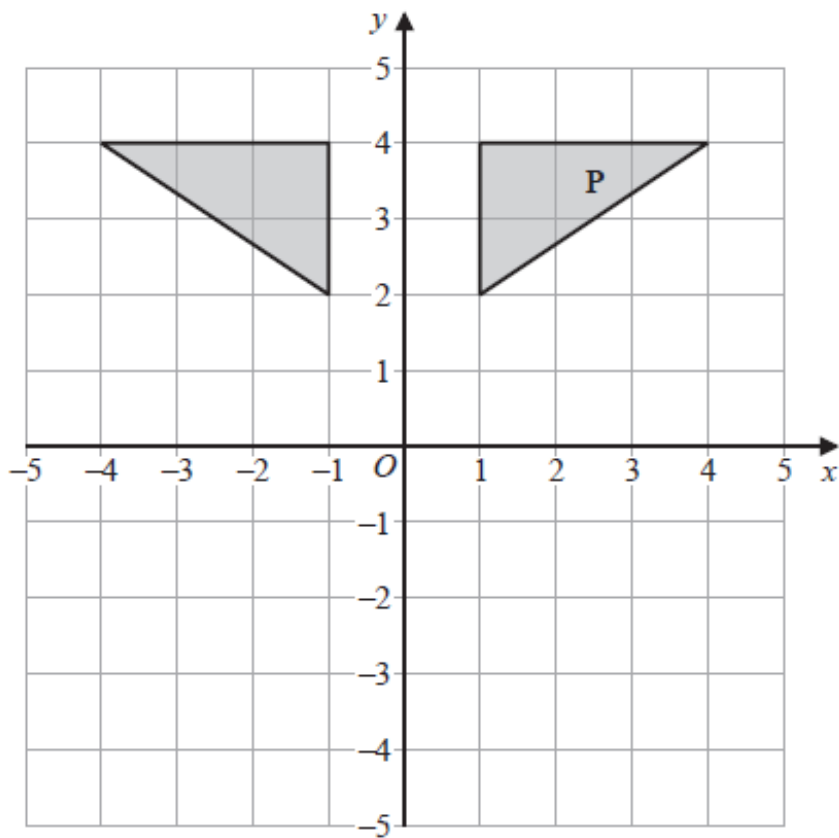
- 6 The diagram shows three motorway service stations  $P$ ,  $Q$  and  $R$  on a map.



The map has a scale of 1 cm = 4 km.  
 Work out the real distance from  $P$  to  $R$ .

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

- 7 Alex is asked to reflect shape **P** in the  $x$ -axis.  
Here is the diagram Alex draws.



Explain the mistake Alex has made.

.....

.....

.....

(Total for Question 7 is 1 mark)

- 8 Change 7 metres to centimetres.

..... centimetres

(Total for Question 8 is 1 mark)

- 9 Change 9 metres into centimetres.

..... centimetres

(Total for Question 9 is 1 mark)



10 Write down a square number that is between 10 and 50

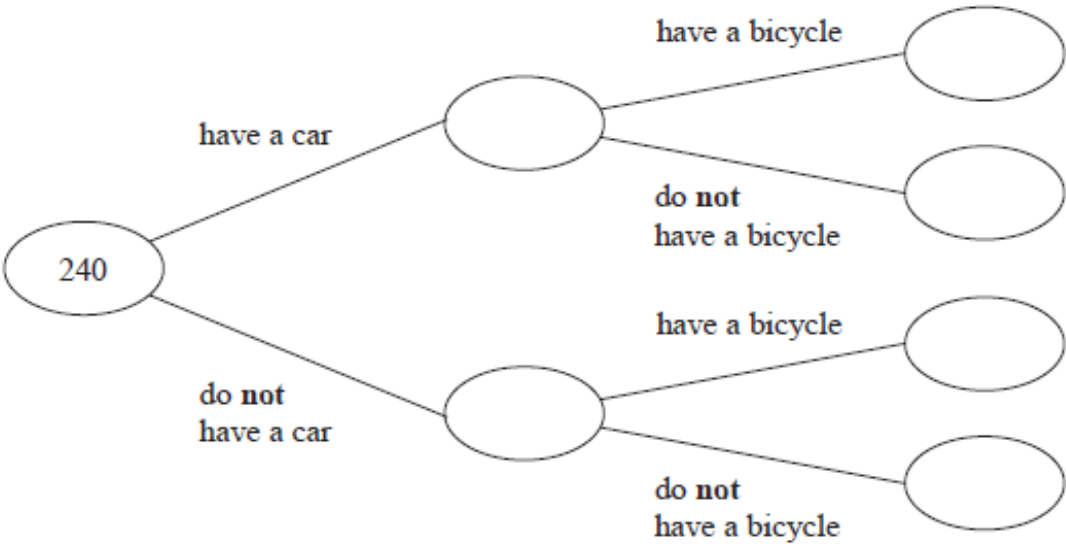
.....  
(Total for Question 10 is 1 mark)

11 240 people work at a factory.

Of these people

- 150 have a car
- 110 have a bicycle
- 65 of the people who have a bicycle do **not** have a car.

(a) Use this information to complete the frequency tree.



(Total for Question 11 is 3 marks)

12 There are 50 teachers in a school.  
This is  $\frac{1}{16}$  of the total number of people in the school.  
Work out the total number of people in the school.

.....  
(Total for Question 12 is 2 marks)

**\*13** Karen is organising a party for a charity.

She spends  
£100 on food  
£120 on a hall  
£80 on a DJ.

Karen sells 54 tickets for the party.  
Each ticket costs £7.50  
Work out the percentage profit Karen makes for the charity.

.....%  
**(Total for Question 13 is 4 marks)**

**\*14** Expand and simplify  $3(2y - 5) + 7(y + 2)$

.....  
**(Total for Question 14 is 2 marks)**

**15** Rima is going to roll a fair 6-sided dice.

(a) Choose the word that best describes the probability that the dice will land on the number 3

impossible	unlikely	evens	likely	certain
------------	----------	-------	--------	---------

.....  
**(Total for Question 15 is 1 mark)**

**TOTAL FOR PAPER IS 31 MARKS**

## **WEEK 3 TASK 3**

# One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Simplify  $t^5 + t^5$

6

Write down the value of the 7 in the number 1074

2

What is the time 1 hours 20 minutes after 9.15 am?

7

Write down two factors of 12

3

Write 0.4 as a percentage

8

Here is a list of numbers

7      8      15      16      18      22

Write down the number from the list that is a multiple of 6

4

Write 327 correct to the nearest ten

9

Write down a 3 digit number that is a multiple of 5

5

Write 19% as a fraction

10

Write  $\frac{9}{100}$  as a decimal



## **WEEK 3 TASK 4**

**Estimated completion time = 30 minutes.**

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 Write 8061 correct to the nearest hundred.

.....  
(Total for Question 2 is 1 mark)

- 2 Here are the first four terms of a number sequence.

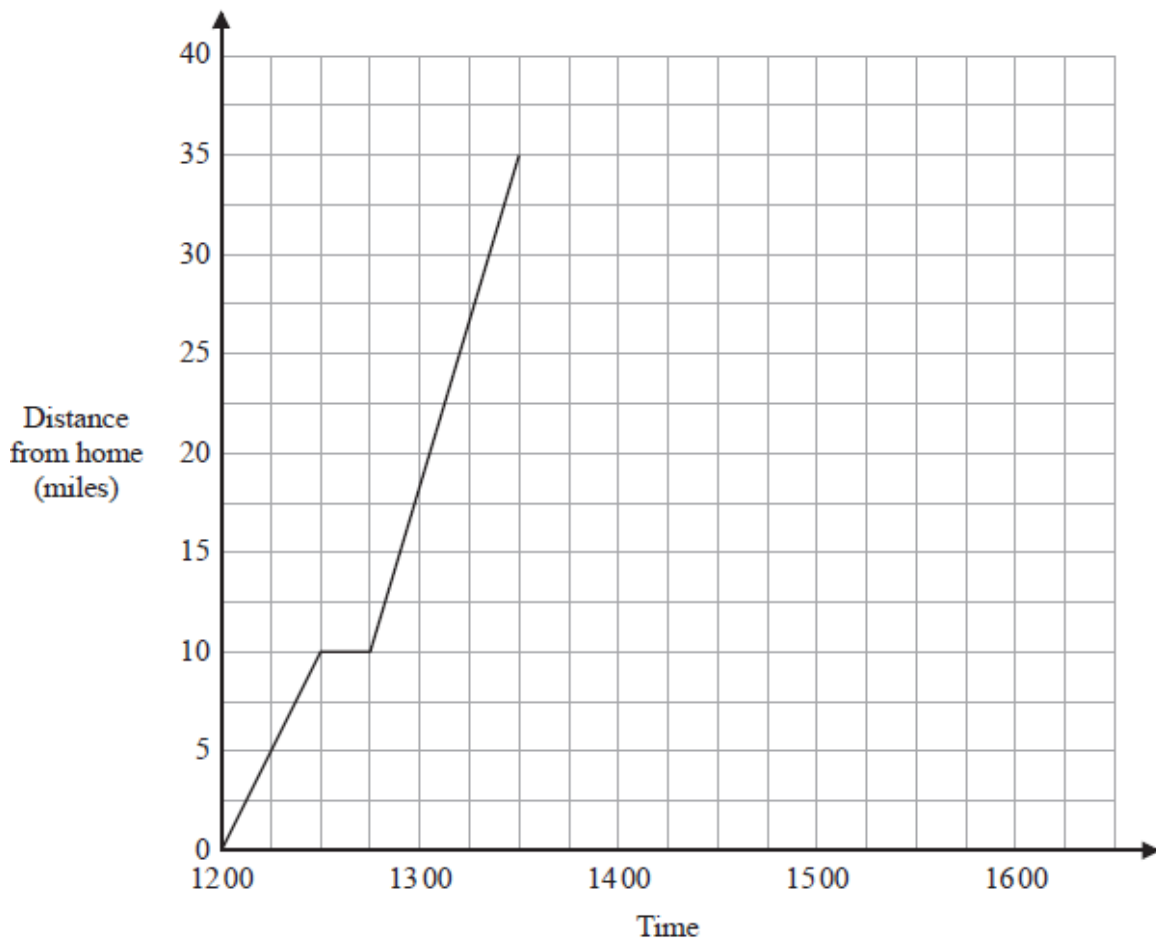
97                  91                  85                  79

Explain why 52 is **not** a number in this sequence.

.....  
.....  
(Total for Question 2 is 1 mark)

- 3 Rowena drove from her home to a beach.

Here is a travel graph for her journey.



Rowena stopped at a cafe on her way to the beach.

(a) (i) How many minutes did Rowena take to drive to the cafe?

..... minutes  
(1)

(ii) Write down the distance from Rowena's home to the cafe.

..... miles  
(1)

Rowena stayed at the beach for  $1\frac{1}{2}$  hours.

She then drove home without stopping.

Rowena arrived home at 16 00

(b) On the grid, complete the travel graph.

(2)

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

---

**\*4** Ali buys packs of balloons and boxes of pencils.

There are 30 balloons in each pack.

There are 24 pencils in each box.

Ali buys exactly the same number of balloons and pencils.

Work out how many packs of balloons and how many boxes of pencils she could have bought.

You must show all your working.

..... packs of balloons

..... boxes of pencils

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

---

- 5    Ralph rolls a biased dice once.  
The probability that he gets the number 5 is 0.4

Work out the probability that Ralph does **not** get the number 5

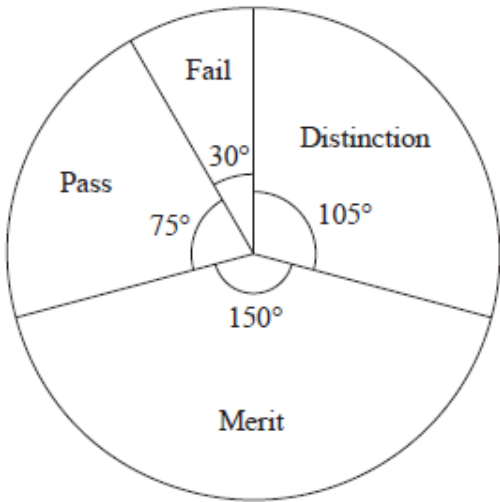
.....  
(Total for Question 5 is 1 mark)

- 6    Write the following numbers in order of size.  
Start with the smallest number.

$\frac{7}{12}$       0.56      57%       $\frac{6}{11}$       0.558

.....  
(Total for Question 6 is 2 marks)

- 7    Some students took a guitar exam.  
The pie chart shows information about the grades the students got.



Write down the modal grade.

.....  
(Total for Question 7 is 1 mark)



8 Write the following numbers in order of size.  
Start with the smallest number.

$5.625 \times 10^4$       5625       $56\,250 \times 10^{-3}$        $0.005\,625 \times 10^5$

.....  
(Total for Question 8 is 2 marks)

9 Miklos is swimming lengths of a swimming pool.  
Each length of the pool is 25 m.  
Miklos has swum 178 lengths of the pool.  
He wants to swim a total distance of 8050 m.  
Calculate how many more lengths Miklos needs to swim.

.....  
(Total for Question 9 is 3 marks)

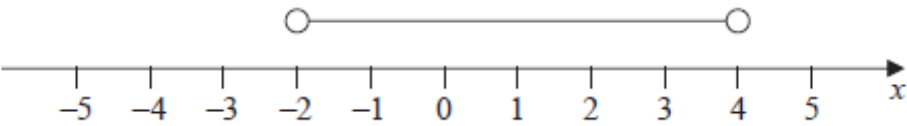
10 Mandy buys a 12 kilogram bag of dog food.  
Mandy’s dog has 3 meals a day.  
She gives her dog 105 grams of dog food for each of these meals.  
How many complete weeks will the bag of dog food last?  
You must show all your working.

.....  
(Total for Question 10 is 5 marks)

11 Change 4000 grams into kilograms.

..... kilograms  
(Total for Question 12 is 1 mark)

**\*12** Jenna is asked to show the inequality  $-3 < x \leq 4$  on a number line.  
Here is her answer.



Write down two mistakes Jenna has made.

- 1.....
- .....
- 2.....
- .....

(Total for Question 12 is 2 marks)

**13** A chess match lasted  $3\frac{1}{4}$  hours.  
The match finished at 14 10  
At what time did the chess match start?

.....  
(Total for Question 13 is 2 marks)

**14** There are only red beads and green beads in a bag.  
number of red beads : number of green beads = 1 : 4  
There are 35 red beads in the bag.  
Work out the total number of beads in the bag.

.....  
(Total for Question 14 is 2 marks)

**TOTAL FOR PAPER IS 30 MARKS**

## **WEEK 3 TASK 5**

# One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Change 0.82 kilograms  
to grams

6

Write down the 7th odd number

2

Write 0.23 as a percentage

7

Work out  $3^2$

3

Write down the value of the 7  
in the number 8765

8

Write 37% as a fraction

4

Here is a list of numbers

20    40    60    80    100

One of these numbers is a multiple of 25  
Which number?

9

Work out  $\frac{1}{4}$  of 28

5

Write down two factors of 7

10

Simplify  $7a + a - 5a$



# MARKSCHEMES

## **WEEK 3 TASK 1**

# One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Write down two factors of 15

Any two from  
1, 3, 5 or 15

6

Change 1.5 kilometres to metres

1500 metres

2

Write brackets ( ) in this statement  
to make it correct

$(8 \times 4) + 6 = 38$

7

Write the number two million in figures

2 000 000

3

Work out  $31.7 \times 100$

3170

8

Write 15% as a decimal

0.15

4

Write 4.666 correct to the  
nearest whole number

5

9

Simplify  $3e - e + 4e$

$6e$

5

Write in order of size. Start with  
the smallest number

1.02    0.12    1.20    0.21  
0.12    0.21    1.02    1.20

10

Write 1476 to the nearest 10

1480

## **WEEK 3 TASK 2**



Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 (a) Work out  $\frac{9.8 + 6.8}{4.2 \times 2.1}$

Give your answer as a decimal.  
Write down all the figures on your calculator display.

16.6  
8.82

1 mark for either  
of these

1.8820861678

Final mark

(2)

(b) Write your answer to part (a) correct to 2 decimal places.

1.8820..

1.88

1 mark

(1)

(Total for Question 1 is 3 marks)

2 The table shows information about the weights of the people in a hotel lift.

Weight	Number of people			
40 kg	x	1	=	40
50 kg	x	2	=	100
60 kg	x	4	=	240
70 kg	x	5	=	350
80 kg	x	3	=	240
90 kg	x	1	=	90

1 mark for  
at least  
three of  
these

Show that the total weight of the people in the lift is less than 1200 kg.

1 mark

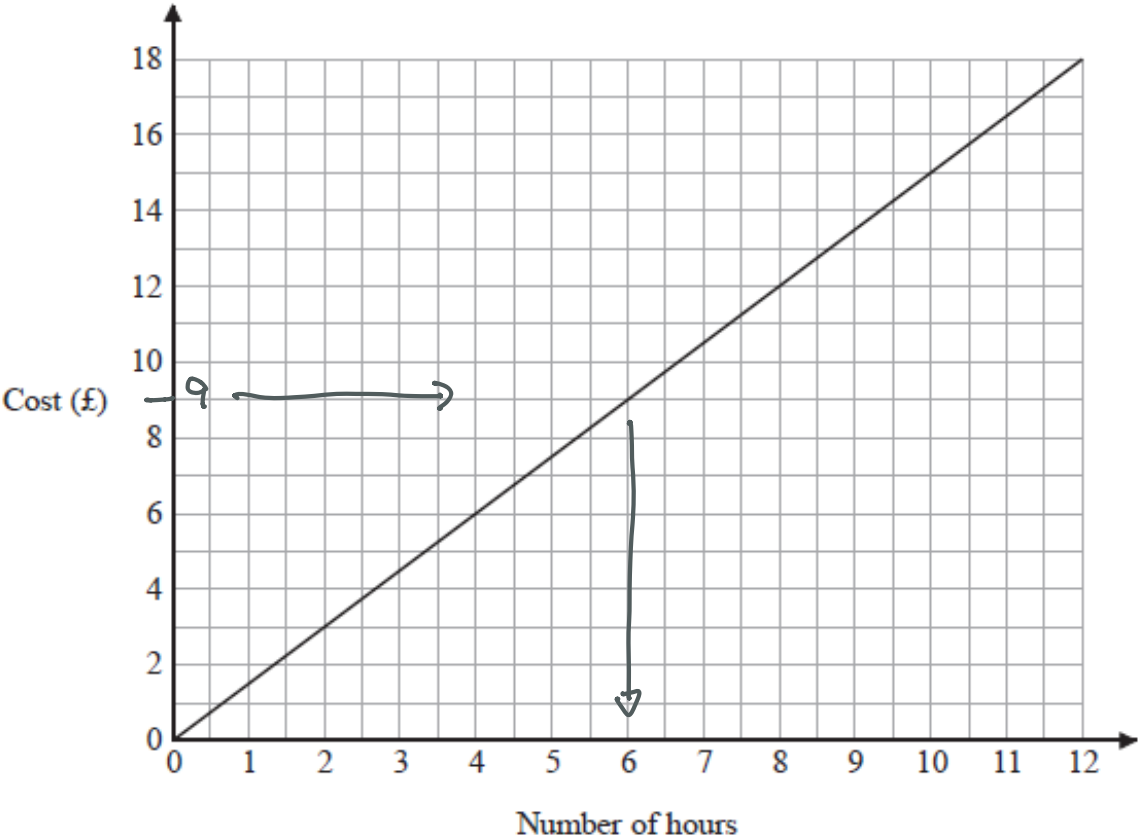
40 + 100 + 240 + 350 + 240 + 90 = 1060

Final mark

1060 < 1200

(Total for Question 2 is 3 marks)

3 This graph can be used to find the cost of parking a car in a car park for up to 12 hours.



Justin drives into the car park at 08 00 in the morning.  
When he drives out of the car park he has to pay £9  
At what time does Justin drive out of the car park?

£9 = 6 hours

1 mark

Final mark

8 00 + 6 hours = 2pm

1 mark

2pm or 14:00

(Total for Question 3 is 3 marks)

\*4 Work out the value of  $\frac{25 - \sqrt{43.87}}{6 + 2.1^2}$

Write down all the figures on your calculator display.

18.376...  
10.41

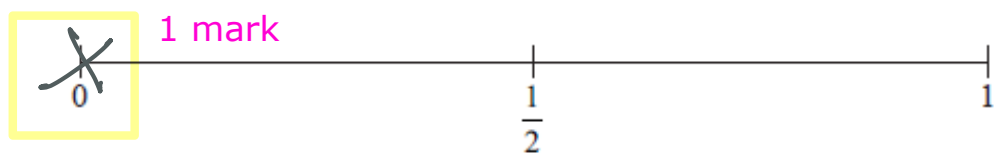
1 mark for either of these

Final mark

1.76527923

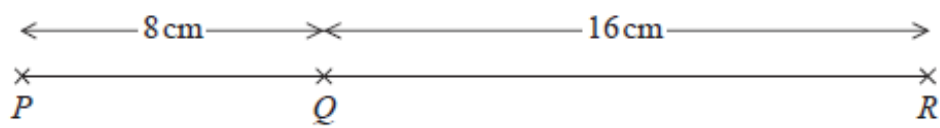
(Total for Question 4 is 2 marks)

- 5 Shari has a fair ordinary dice.  
 She rolls the dice once.  
 On the probability scale, mark with a cross (×) the probability that Shari gets the number 7



(Total for Question 5 is 1 mark)

- 6 The diagram shows three motorway service stations  $P$ ,  $Q$  and  $R$  on a map.



The map has a scale of 1 cm = 4 km.  
 Work out the real distance from  $P$  to  $R$ .

1 mark

Total length P to R = 8 + 16 = 24 cm

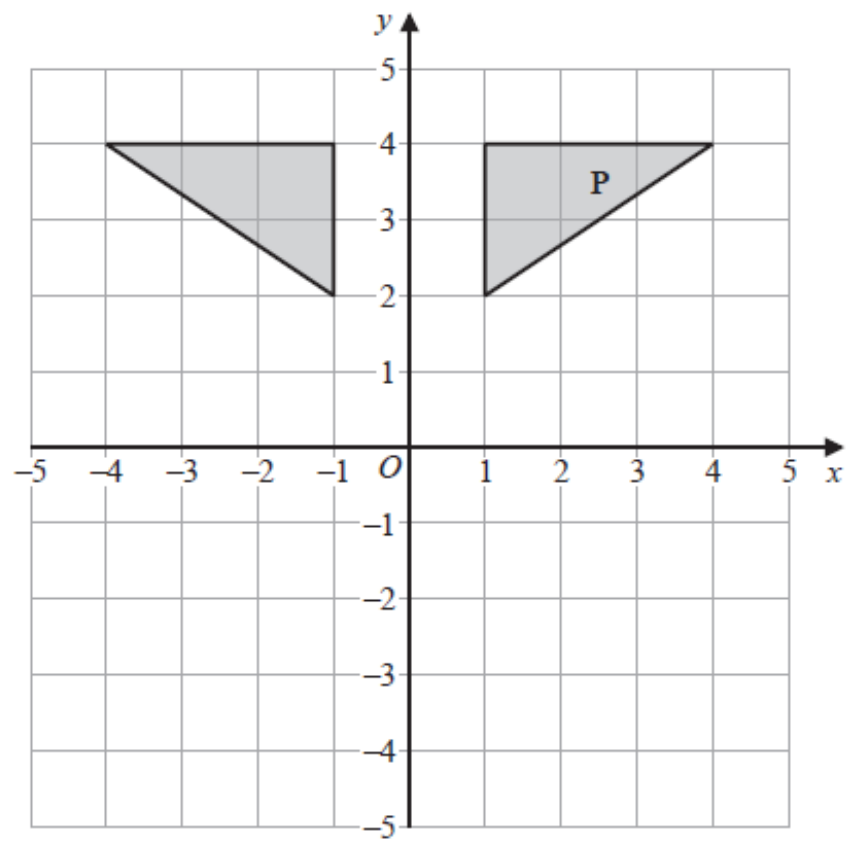
1 mark

1 cm = 4 km  
 x 24      x 24  
 24 cm = 96 km

96 Final mark km

(Total for Question 6 is 3 marks)

- 7 Alex is asked to reflect shape **P** in the  $x$ -axis.  
Here is the diagram Alex draws.



Explain the mistake Alex has made. 1 mark

..... he reflected P in the y axis not the x-axis .....

.....

.....

(Total for Question 7 is 1 mark)

- 8 Change 7 metres to centimetres.

$$\begin{array}{rcl} 1\text{m} & = & 100\text{cm} \\ 7\text{m} & & \times 7 \end{array}$$

..... 700 1 mark centimetres .....

(Total for Question 8 is 1 mark)

- 9 Change 9 metres into centimetres.

$$\begin{array}{rcl} 1\text{m} & = & 100\text{cm} \\ 9\text{m} & & \times 9 \end{array}$$

..... 900 1 mark centimetres .....

(Total for Question 9 is 1 mark)

10 Write down a square number that is between 10 and 50

~~14~~ ~~25~~ 16 25 36 49

1 mark

any one of  
16, 25, 36 or 49

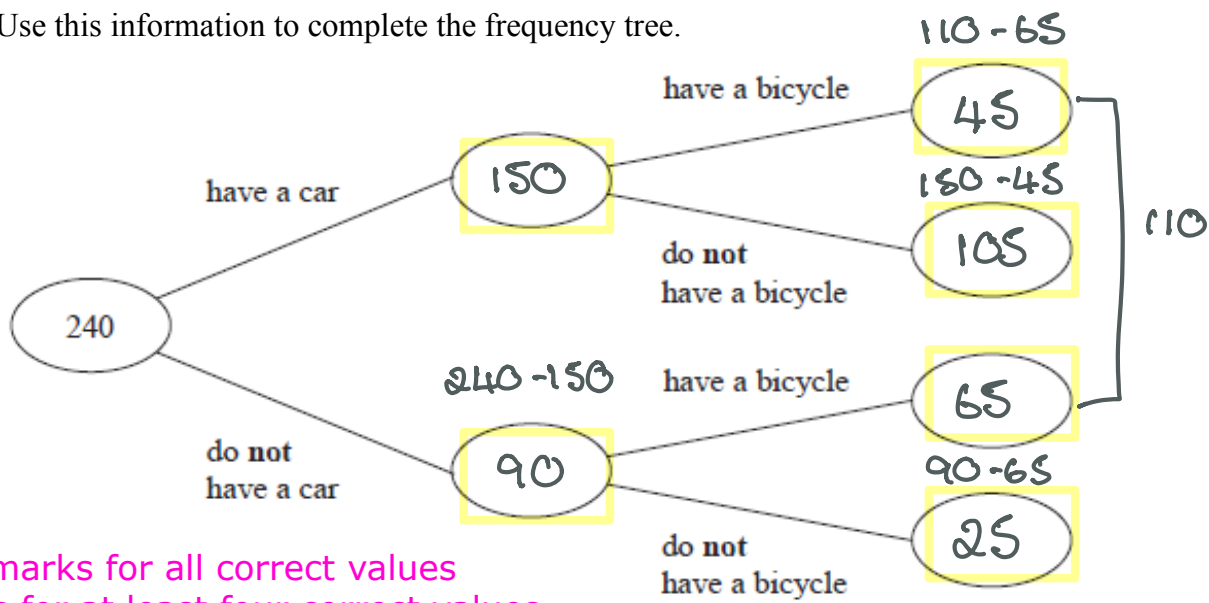
(Total for Question 10 is 1 mark)

11 240 people work at a factory.

Of these people

- 150 have a car
- 110 have a bicycle
- 65 of the people who have a bicycle do **not** have a car.

(a) Use this information to complete the frequency tree.



3 marks for all correct values  
2 marks for at least four correct values  
1 mark for at least one correct value

Total for Question 11 is 3 marks)

12 There are 50 teachers in a school.  
This is  $\frac{1}{16}$  of the total number of people in the school.  
Work out the total number of people in the school.

$$\frac{1}{16} = 50$$
$$\frac{16}{16} = 50 \times 16 = 80$$

1 mark

800 Final mark

(Total for Question 12 is 2 marks)

**\*13** Karen is organising a party for a charity.

She spends

£100 on food  
£120 on a hall  
£80 on a DJ.

Karen sells 54 tickets for the party.

Each ticket costs £7.50

Work out the percentage profit Karen makes for the charity.

tickets  $54 \times 7.50 = £405$  1 mark

cost  $100 + 120 + 80 = £300$  1 mark

Profit =  $405 - 300 = £105$

% profit =  $\frac{105}{300} \times 100$  1 mark 35 Final mark %

(Total for Question 13 is 4 marks)

**\*14** Expand and simplify  $3(2y - 5) + 7(y + 2)$

1 mark for either of these

$6y - 15$  +  $7y + 14$

=  $6y + 7y - 15 + 14$

Final mark

$13y - 1$

(Total for Question 14 is 2 marks)

**15** Rima is going to roll a fair 6-sided dice.

(a) Choose the word that best describes the probability that the dice will land on the number 3

impossible	unlikely	evens	likely	certain
------------	----------	-------	--------	---------

unlikely

1 mark

(Total for Question 15 is 1 mark)

**TOTAL FOR PAPER IS 31 MARKS**

## **WEEK 3 TASK 3**

# One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Simplify  $t^5 + t^5$   
 $2t^5$

6

Write down the value of the 7 in  
the number 1074

70

2

What is the time 1 hours 20  
minutes after 9.15 am?

10.35 am

7

Write down two factors of 12

Any two from

1,2,3,4,6 or 12

3

Write 0.4 as a percentage

40%

8

Here is a list of numbers

7      8      15      16      18      22

Write down the number from the list  
that is a multiple of 6

18

4

Write 327 correct to the nearest ten

330

9

Write down a 3 digit number  
that is a multiple of 5

e.g. 105

5

Write 19% as a fraction

$\frac{19}{100}$

or equivalent

10

Write  $\frac{9}{100}$  as a decimal

0.09



## **WEEK 3 TASK 4**

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1

Write 8061 correct to the nearest hundred.

8000

8100

8100

1 mark

(Total for Question 2 is 1 mark)

2

Here are the first four terms of a number sequence.

97

91

85

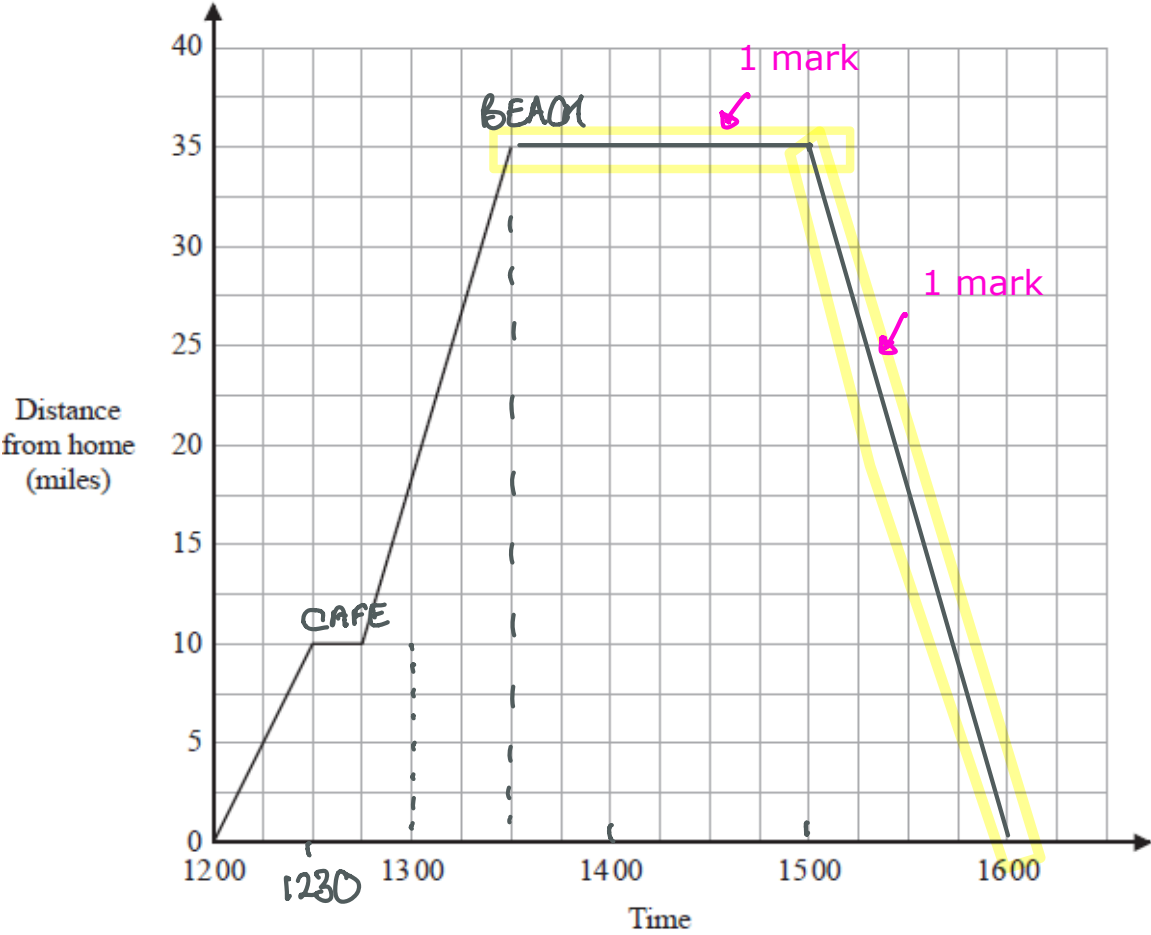
79

Explain why 52 is **not** a number in this sequence.

52 is even, all the numbers in the sequence are odd

(Total for Question 2 is 1 mark)

3 Rowena drove from her home to a beach.  
Here is a travel graph for her journey.



Rowena stopped at a cafe on her way to the beach.

(a) (i) How many minutes did Rowena take to drive to the cafe?

..... 30 ..... minutes  
1 mark  
(1)

(ii) Write down the distance from Rowena’s home to the cafe.

..... 10 ..... miles  
1 mark  
(1)

Rowena stayed at the beach for  $1\frac{1}{2}$  hours.

She then drove home without stopping.

Rowena arrived home at 16 00

(b) On the grid, complete the travel graph.

see graph . (2)

(Total for Question 3 is 4 marks)

\*4 Ali buys packs of balloons and boxes of pencils.

There are 30 balloons in each pack.

There are 24 pencils in each box.

Ali buys exactly the same number of balloons and pencils.

Work out how many packs of balloons and how many boxes of pencils she could have bought.

You must show all your working.

Balloons	<span style="border: 1px solid yellow; padding: 2px 10px;">30</span> <span style="border: 1px solid yellow; padding: 2px 10px;">60</span> <span style="border: 1px solid yellow; padding: 2px 10px;">90</span>	<span style="border: 1px solid yellow; padding: 2px 10px;">120</span>	1 mark	x 4
Pencils	<span style="border: 1px solid yellow; padding: 2px 10px;">24</span> <span style="border: 1px solid yellow; padding: 2px 10px;">48</span> <span style="border: 1px solid yellow; padding: 2px 10px;">72</span>	96	<span style="border: 1px solid yellow; padding: 2px 10px;">120</span>	x 5

1 mark

..... 4 ..... packs of balloons  
Final mark 5 ..... boxes of pencils

(Total for Question 4 is 3 marks)

5 Ralph rolls a biased dice once.  
The probability that he gets the number 5 is 0.4

Work out the probability that Ralph does **not** get the number 5

$1 - 0.4$

**0.6** 1 mark

(Total for Question 5 is 1 mark)

6 Write the following numbers in order of size.  
Start with the smallest number.

1 mark

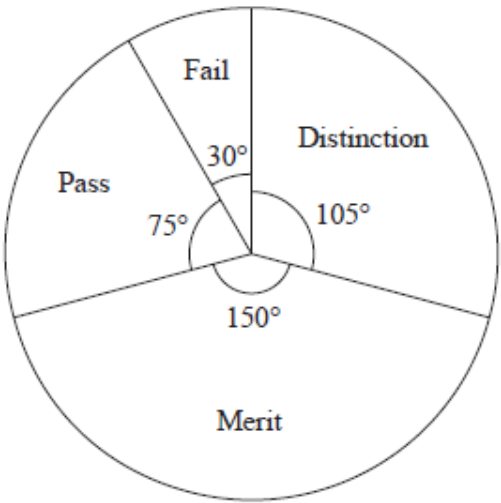
$\frac{7}{12}$  0.56 57%  $\frac{6}{11}$  0.558

**0.558** **0.56** **0.57**

**$\frac{6}{11}$  0.558 0.56 57%  $\frac{7}{12}$**  Final mark

(Total for Question 6 is 2 marks)

7 Some students took a guitar exam.  
The pie chart shows information about the grades the students got.



Write down the modal grade.

**merit** 1 mark

(Total for Question 7 is 1 mark)

- 8 Write the following numbers in order of size.  
Start with the smallest number.

1 mark

$5.625 \times 10^4$      5625      $56\,250 \times 10^{-3}$       $0.005\,625 \times 10^5$   
56250     5625     56.250     562.5

Final mark

$56250 \times 10^{-3}$       $0.005625 \times 10^5$      5625      $5.625 \times 10^4$

(Total for Question 8 is 2 marks)

- 9 Miklos is swimming lengths of a swimming pool.  
Each length of the pool is 25 m.  
Miklos has swum 178 lengths of the pool.  
He wants to swim a total distance of 8050 m.  
Calculate how many more lengths Miklos needs to swim.

1 mark

$178 \times 25 = 4450$  m

$8050 - 4450 = 3600$

1 mark

$3600 \div 25 = 144$

Final mark

144

(Total for Question 9 is 3 marks)

- 10 Mandy buys a 12 kilogram bag of dog food.  
Mandy's dog has 3 meals a day.  
She gives her dog 105 grams of dog food for each of these meals.  
How many complete weeks will the bag of dog food last?  
You must show all your working.

1 mark

$1\text{kg} = 1000\text{g}$  so  $12\text{kg} = 12000\text{g}$

$105 \times 3 = 315\text{g a day}$  1 mark

$12000 \div 315 = 38.09\dots$  days 1 mark

$38\text{ days} = 5.4\dots$  weeks 1 mark

Final mark

5

(Total for Question 10 is 5 marks)

- 11 Change 4000 grams into kilograms.

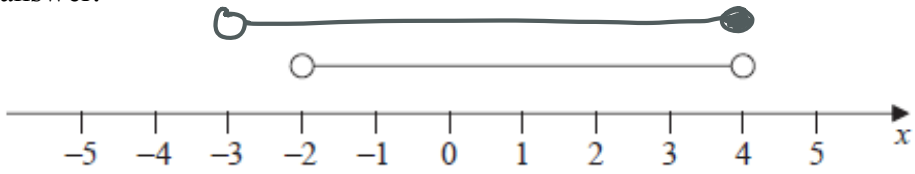
1 mark

4 kilograms

(Total for Question 12 is 1 mark)

\*12 Jenna is asked to show the inequality  $-3 < x \leq 4$  on a number line.

Here is her answer.



Write down two mistakes Jenna has made.

1 The circle at -2 should be at -3 1 mark

2 The circle at 4 should be solid 1 mark

(Total for Question 12 is 2 marks)

13 A chess match lasted  $3\frac{1}{4}$  hours.

The match finished at 14 10

At what time did the chess match start?

$\frac{1}{4}$  hour = 15 mins 1 mark

14:10  
13:55  
12:55  
11:55  
10:55

10 55 Final mark

(Total for Question 13 is 2 marks)

14 There are only red beads and green beads in a bag.

number of red beads : number of green beads = 1 : 4

There are 35 red beads in the bag.

Work out the total number of beads in the bag.

R G Total  
1 : 4  
x 35 x 35  
35 : 140 175 1 mark

175 Final mark

(Total for Question 14 is 2 marks)

TOTAL FOR PAPER IS 30 MARKS

## **WEEK 3 TASK 5**

# One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Change 0.82 kilograms  
to grams

820 grams

6

Write down the 7th odd number

13

2

Write 0.23 as a percentage

23%

7

Work out  $3^2$

9

3

Write down the value of the 7  
in the number 8765

700

8

Write 37% as a fraction

$\frac{37}{100}$

or equivalent

4

Here is a list of numbers

20    40    60    80    100

One of these numbers is a multiple of 25  
Which number?

100

9

Work out  $\frac{1}{4}$  of 28

7

5

Write down two factors of 7

1 and 7

10

Simplify  $7a + a - 5a$

$3a$