



THIRD SPACE  
LEARNING

# Mathematics

## Paper 3

### (Calculator)

## Foundation Tier

Edexcel GCSE

SET 3

# Mathematics Paper 3 (Calculator) Foundation Tier Edexcel

## GCSE SET 3

Name

Total marks

Paper length: 1hr 30mins



### Instructions

- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name, centre number and candidate number.
- Answer all questions.
- Answer the questions in the spaces provided – there may be more space than you need.
- You must show all your working.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- Calculators may be used.

### Information

- The total mark for this paper is 80
- The marks for each question are shown in brackets – use this as a guide as to how much time to spend on each question.

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Question	Mark
1	
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**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

This practice paper is based on the topics from the **advanced information for the November 2024 exam series**.

*Please note, this practice paper is an example to help revision, these topics can be tested in other ways and other topics may be included in the actual papers*

**1** Write 35% as a fraction

-----  
**(Total for Question 1 is 1 mark)**

---

**2** Work out  $\frac{1}{4}$  of 24

-----  
**(Total for Question 2 is 1 mark)**

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**3** What time is 3 hours 20 minutes after 8:15am?

-----  
**(Total for Question 3 is 1 mark)**

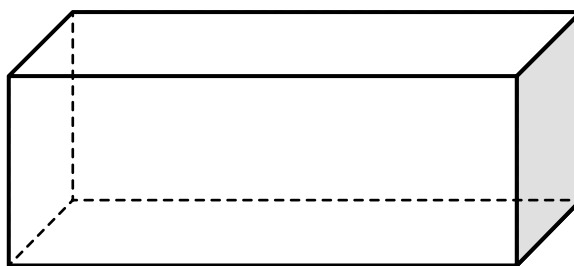
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**4** Write down two factors of 18

-----  
**(Total for Question 4 is 1 mark)**

---

**5** Here is a 3D shape.



(a) Write down the name of the 3D shape.

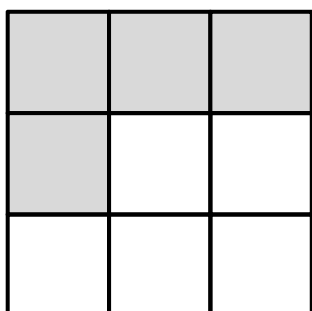
-----  
**(1)**

(b) Write down the number of vertices of this 3D shape.

-----  
**(1)**

**(Total for Question 5 is 2 marks)**

**6** Here is a grid of squares.

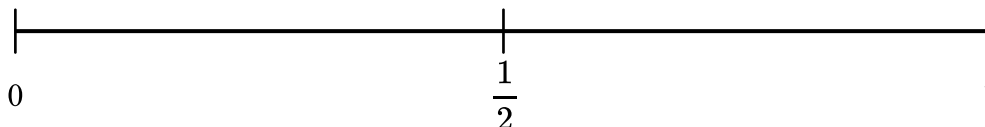


Write down the fraction of the squares which are shaded.

-----  
**(Total for Question 6 is 1 mark)**

7 An ordinary dice is thrown.

- (a) On the probability scale below, mark with a cross (X) the probability that the dice lands on a prime number.



(1)

- (b) Write down the probability that the dice lands on a number greater than 4.

(1)

(Total for Question 7 is 2 marks)

8 Gary buys a screwdriver for £35 and 3 boxes of screws for £4.99 each.

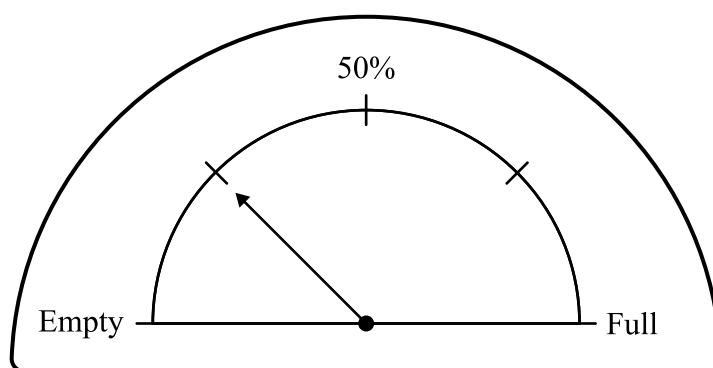
Gary pays with three £20 notes.

How much change does Gary get?

£

(Total for Question 8 is 3 marks)

- 9 Here is the fuel gauge for a car.



The fuel tank holds 50 *litres* when it is full.

Work out how many *litres* of fuel are left in the tank.

-----  
litres

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

- 10 (a) Work out the value of  $\frac{500}{2.5 \times 8}$

-----  
**(1)**

- (b) Write down the reciprocal of 3.

-----  
**(1)**

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

- 11** Pens are sold in small packs of 12 pens, medium packs of 18 pens or large packs of 25 pens.  
Freddie buys 6 small packs of pens, 5 medium packs of pens and some large packs of pens.  
In total Freddie buys 312 pens.  
Work out how many large packs of pens Freddie buys.

-----  
**(Total for Question 11 is 3 marks)**

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- 12** Jovy spends 2 weeks working on her project.  
Olivia spends 18 days working on her project.

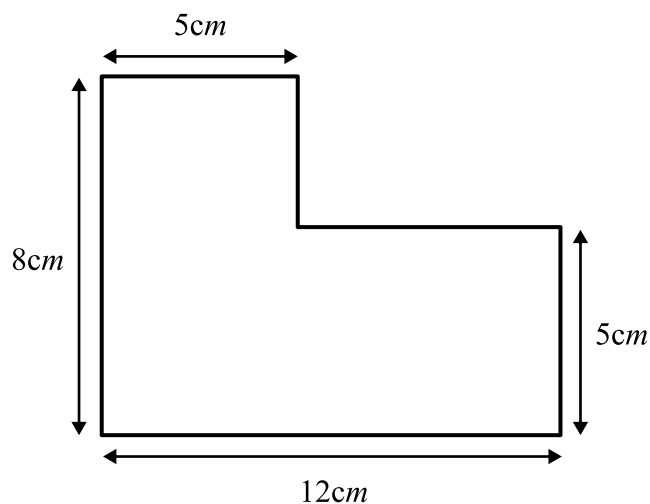
Write, in its simplest form, the ratio

time spent by Jovy:time spent by Olivia

-----  
**(Total for Question 12 is 2 marks)**

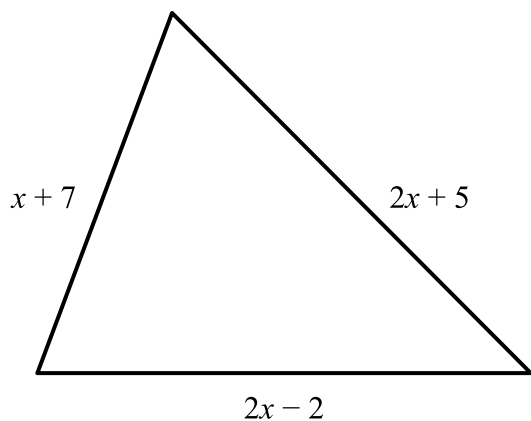
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13



(a) Work out the perimeter of this shape.

----- *cm*  
(2)



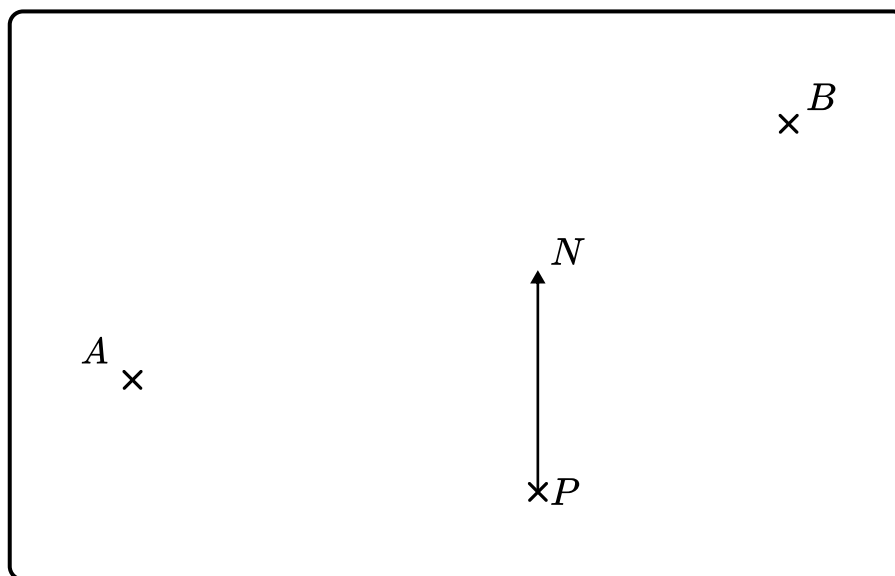
(b) Write an expression, in terms of  $x$ , for the perimeter of this triangle.

-----  
(2)

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



- 14** The accurately drawn map shows the positions of two airports,  $A$  and  $B$ , and a plane,  $P$ .



Scale:  $1\text{ cm}$  represents  $10\text{ km}$

- (a) How far is the plane from airport  $A$ ?

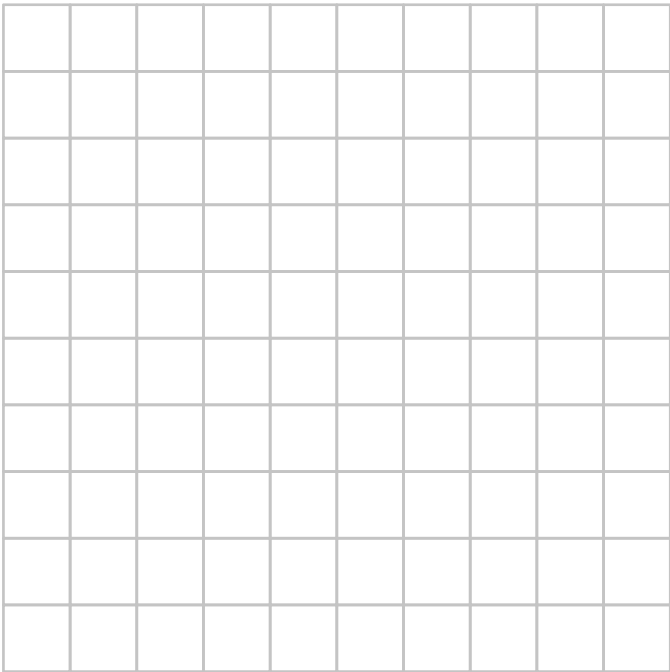
-----  
(2)

- (b) The plane needs to fly to airport  $B$ . Write down the bearing of airport  $B$  from the plane.

-----  
(2)

**(Total for Question 14 is 4 marks)**

15 On the centimetre grid, draw a triangle with an area of  $10\text{cm}^2$



(Total for Question 15 is 2 marks)

16 Kai and Damian share some money in the ratio 2:7.

(a) What fraction of the money does Damian get?

(1)

(b) If Damian gets £30 more than Kai, what is the total amount of money they shared?

£

(3)

(Total for Question 16 is 4 marks)

17 Make  $P$  the subject of the formula  $F = \frac{PQ}{12}$

-----  
(Total for Question 17 is 2 marks)

---

18 (a) Write 4739 correct to 2 significant figures.

-----  
(1)

(b) Write 0.00581 to 1 significant figure.

-----  
(1)

(c) The number,  $n$ , is rounded to the nearest 1 decimal place.

The result is 5.3.

Complete the error interval for  $n$ .

-----  
 $\leq n <$

(2)

(Total for Question 18 is 4 marks)

---

19 Convert  $1m^2$  into  $cm^2$

-----  
 $cm^2$

(Total for Question 19 is 1 mark)

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20 (a) Solve  $4n + 5 = 3(2n - 7)$

$n =$  -----

(3)

(b) Solve  $2p^3 = 250$

$p =$  -----

(2)

(Total for Question 20 is 5 marks)

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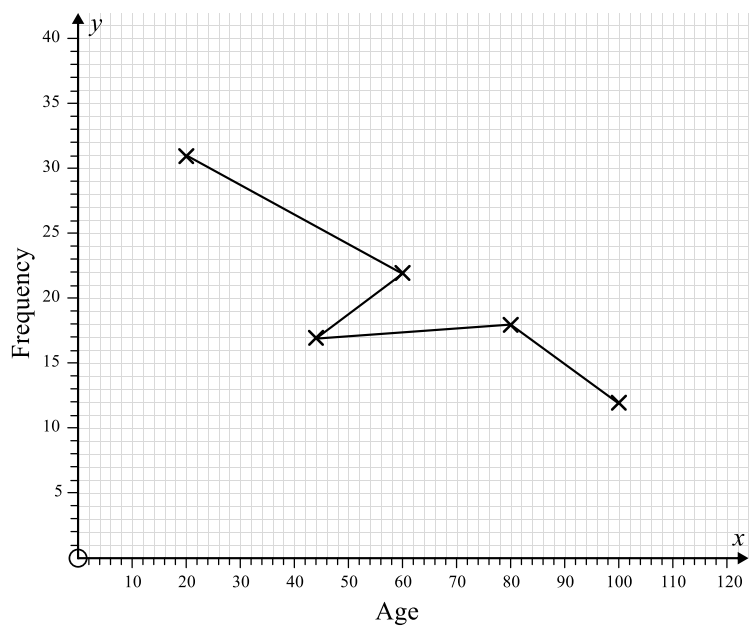
21 The table shows information about the ages of 100 people registered at a doctor's surgery.

Age (years)	Frequency
$0 < a \leq 20$	31
$20 < a \leq 40$	17
$40 < a \leq 60$	22
$60 < a \leq 80$	18
$80 < a \leq 100$	12

(a) Find the class interval that contains the median.

(1)

(b) Rosie draws a frequency polygon for the information in the table.



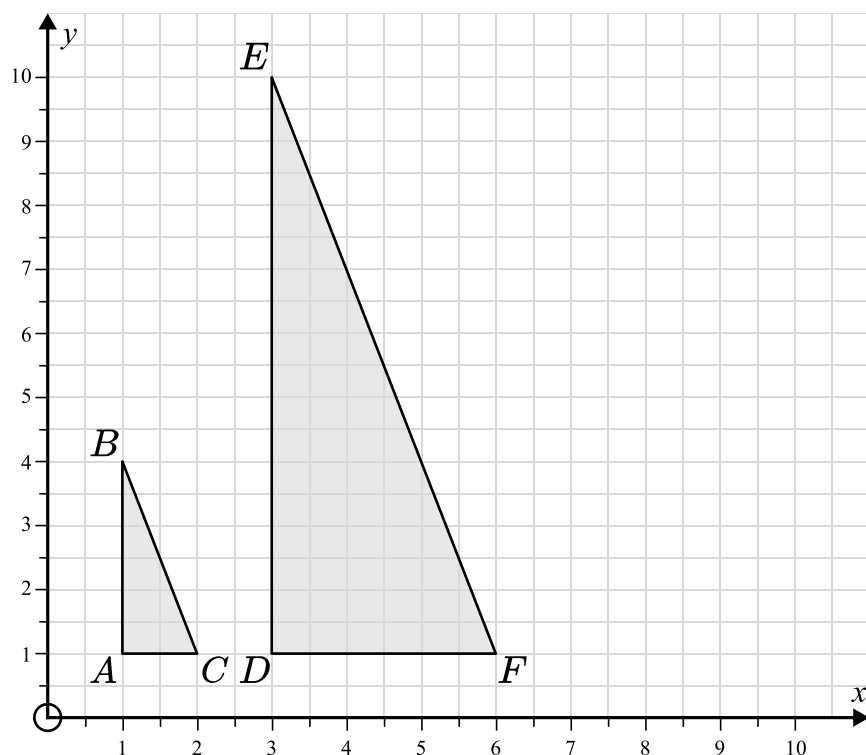
Write down two mistakes that Rosie has made with her frequency polygon.

- 1:  
-----  
  
-----
- 2:  
-----  
  
-----

(2)

(Total for Question 21 is 3 marks)

**22** Here are the triangles  $ABC$  and  $DEF$ .



Describe fully the single transformation that maps triangle  $ABC$  onto triangle  $DEF$ .

-----

-----

-----

**(Total for Question 22 is 3 marks)**

**23** The manager of a clothes shop records the size of the clothes sold one day.

8				
10	10	10		
12	12	12	12	12
14	14			
16	16	16		
18	18			

(a) Work out the mean size of the clothes sold that day.

-----

(2)

(b) Emily says that the mean is not a very useful average.  
Explain why Emily is correct.

-----

-----

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(1)

(c) Which average would be the most useful in this example? Explain why.

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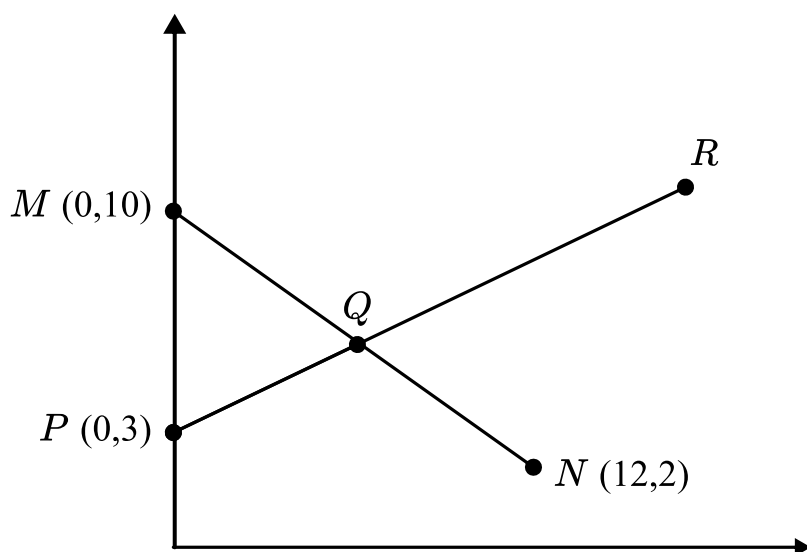
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(2)

**(Total for Question 23 is 5 marks)**

**24** The point  $Q$  is the midpoint of the line  $MN$ .

The point  $Q$  lies on the line  $PR$  such that  $PQ:QR = 1:2$ .



Find the coordinates of the point  $R$ .

( \_\_\_\_\_ , \_\_\_\_\_ )

**(Total for Question 24 is 3 marks)**



**25** The first four terms of a sequence are

$$m + 2$$

$$3m + 3$$

$$5m + 4$$

$$7m + 5$$

The difference between the first and third terms of the sequence is 12.

(a) Work out the value of  $m$ .

$$m = \text{-----}$$

**(2)**

(b) Work out the fifth term in the sequence.

$$\text{-----}$$

**(1)**

**(Total for Question 25 is 3 marks)**

**26** Peter invests £2000 in a savings account for 3 years.

He is paid compound interest at a rate of 4% per annum.

How much money does Peter have in his account at the end of the 3 years?

$$\text{£} \text{-----}$$

**(Total for Question 26 is 3 marks)**

**27** Find the highest common factor ( *HCF* ) of 48 and 64.

-----  
(Total for Question 27 is 2 marks)

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**28** The speed limit in a village is changed from 30 *mph* to 20 *mph*.

Before the speed limit was changed, it took Beth five minutes to drive through the village.

(a) What distance does Beth travel through the village?

-----  
(2)

(b) Mark says that the journey will now take Beth one minute longer.

Is Mark correct?

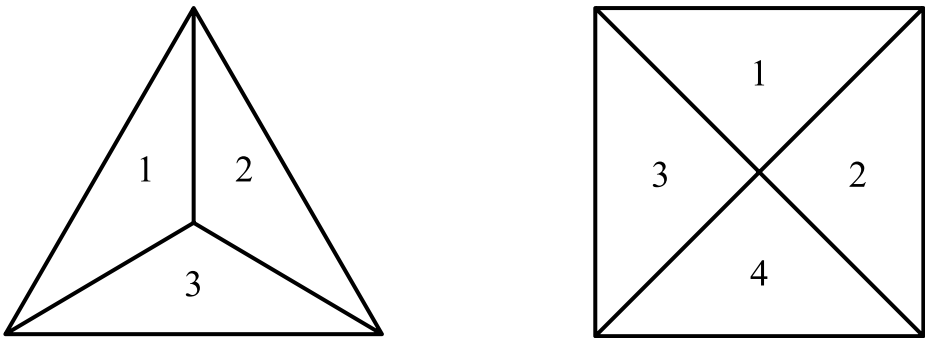
Show how you decide.

-----  
(2)

(Total for Question 28 is 4 marks)

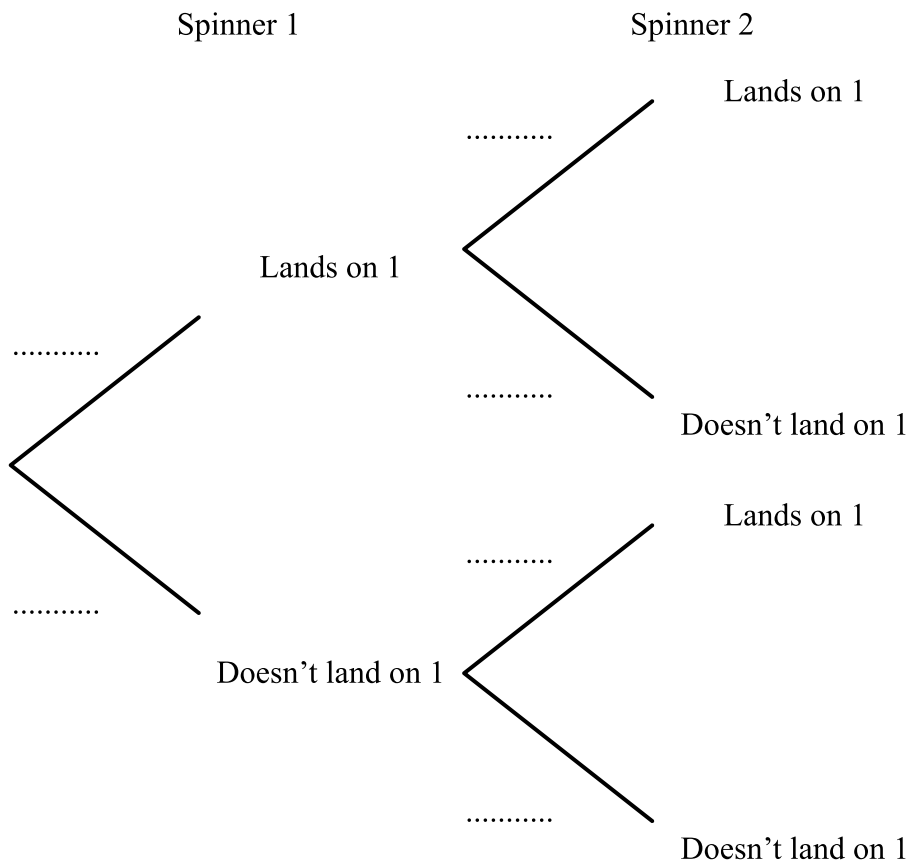
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29 Josh has 2 fair spinners.



He spins both spinners.

(a) Complete the tree diagram.



(2)

(b) Work out the probability that both spinners land on 1.

(2)

(Total for Question 29 is 4 marks)

- 30** The value of Richard's car has decreased by 12%.  
The car now has a value of £8360.  
Find the value of the car before the decrease.

-----  
**(Total for Question 30 is 2 marks)**

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