

12 $T = 6p - 4d$

(a) Work out the value of T when $p = 8$ and $d = 3$

$$T = \dots\dots\dots (2)$$

$$T = 6p - 4d$$

(b) Work out the value of p when $T = -41$ and $d = 5$

$$p = \dots\dots\dots (3)$$

(c) Solve $4(x - 3) = 7x + 15$

Show clear algebraic working.

$$x = \dots\dots\dots (3)$$

(Total for Question 12 is 8 marks)



- 13** Trains leave Agra station to go to New Delhi every 40 minutes.
Trains leave Agra station to go to Mumbai every 48 minutes.

At 6 am a train leaves Agra station to go to New Delhi and at the same time a train leaves Agra station to go to Mumbai.

Work out the next time a train leaves Agra station to go to New Delhi and at the same time a train leaves Agra station to go to Mumbai.

.....
(Total for Question 13 is 3 marks)

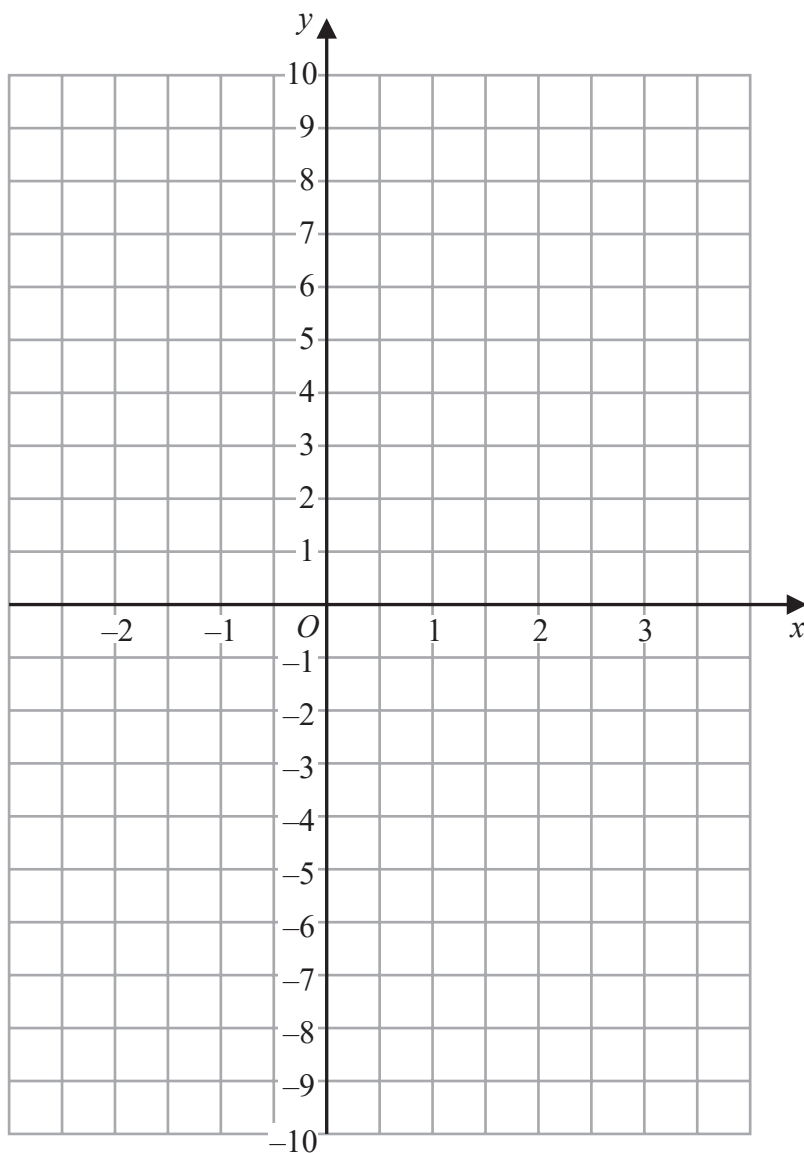
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14 On the grid below, draw the graph of $y = 1 - 3x$ for values of x from -2 to 3



(Total for Question 14 is 3 marks)

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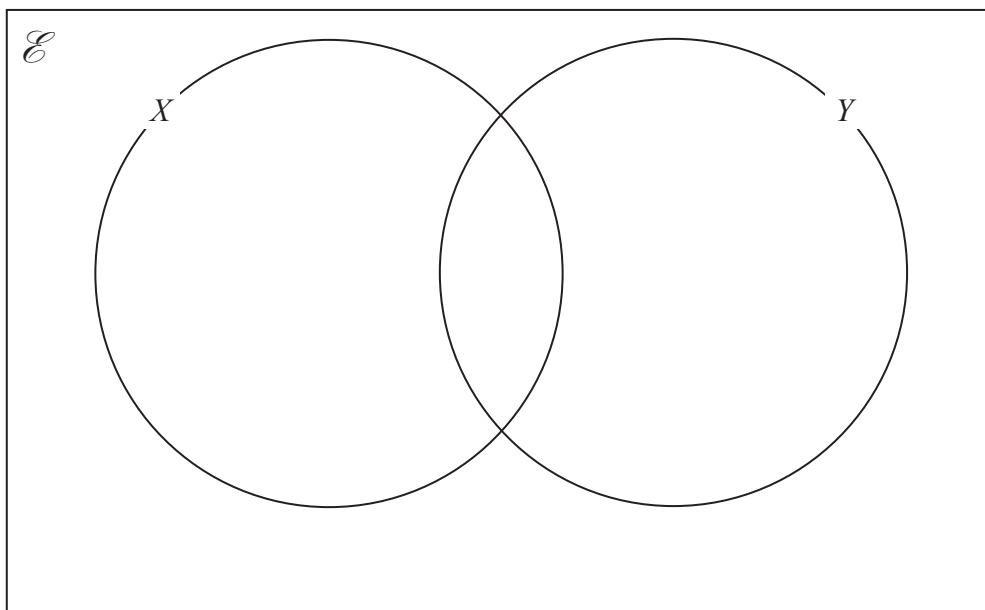
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- 15 $\mathcal{E} = \{2, 4, 6, 8, 10, 12, 14, 16, 18\}$
 $X = \{4, 8, 12, 16\}$
 $Y = \{6, 12, 18\}$

(a) Complete the Venn diagram for this information.



(3)

A number is chosen at random from \mathcal{E}

(b) Find the probability that the number is in the set $X \cup Y$

.....
(2)

(Total for Question 15 is 5 marks)



16 Ravina leaves her home at 1 35 pm in her car.

Ravina drives 60 km from her home to get to an appointment.
She drives at an average speed of 80 km/h.

At what time does Ravina get to her appointment?

.....
(Total for Question 16 is 3 marks)

17 (a) Write down the value of m , given that $3^4 \times 3^5 = 3^m$

$m =$
(1)

(b) Write down the value of n , given that $(5^3)^7 = 5^n$

$n =$
(1)

(c) Find the value of p , given that $\frac{7^8 \times 7^2}{7^p} = 7^6$

$p =$
(2)

(Total for Question 17 is 4 marks)



18 Here are two rectangles, rectangle A and rectangle B .

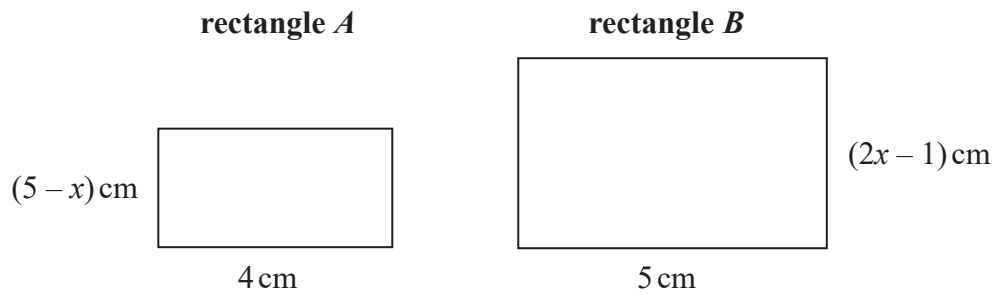


Diagram **NOT**
accurately drawn

The area of rectangle B is twice the area of rectangle A .

Work out the value of x .

Show your working clearly.

$x = \dots\dots\dots$

(Total for Question 18 is 4 marks)

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- 19 The table gives information about the amounts of money, in euros, that 70 of Anjali's friends spent last Saturday.

Money spent (S euros)	Frequency
$0 < S \leq 8$	6
$8 < S \leq 16$	14
$16 < S \leq 24$	19
$24 < S \leq 32$	25
$32 < S \leq 40$	6

One of Anjali's 70 friends is going to be chosen at random.

- (a) Find the probability that this friend spent more than 24 euros last Saturday.

.....
(1)

- (b) Work out an estimate for the mean amount of money spent by Anjali's friends last Saturday.
Give your answer correct to 2 decimal places.

..... euros
(4)

(Total for Question 19 is 5 marks)

