



Name:
Date:

Duration: 30 min
Marks Obtained: /25

Q1 Doreen cycles to her friend's home.
She leaves at 09 40 and arrives at 10 20.

(a) Write down the time taken

(i) in minutes,

Answer (a)(i) minutes [1]

(ii) as a fraction of an hour in its lowest terms.

Answer (a)(ii) hours [1]

(b) The distance Doreen cycles is 8.4km.
Work out Doreen's average speed in km/h.

Answer (b) km/h [2]

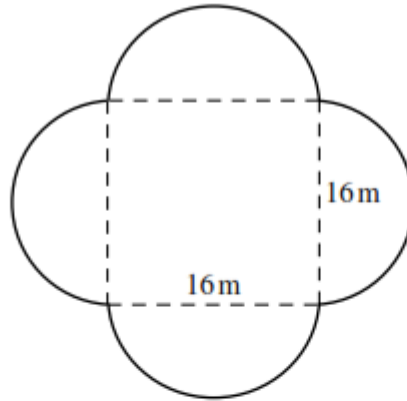
Q2. Solve the simultaneous equations $2c + 5d = 49,$
 $3c + d = 15.$

Answer $c =$

$d =$ [4]

Q3

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The diagram shows a garden.
It is made up of a square of side 16 m and four semicircles of radius 8 m.

Calculate (a) the perimeter of the garden,

Answer (a)m [2]

(b) the area of the garden.

Answer (b)m² [3]

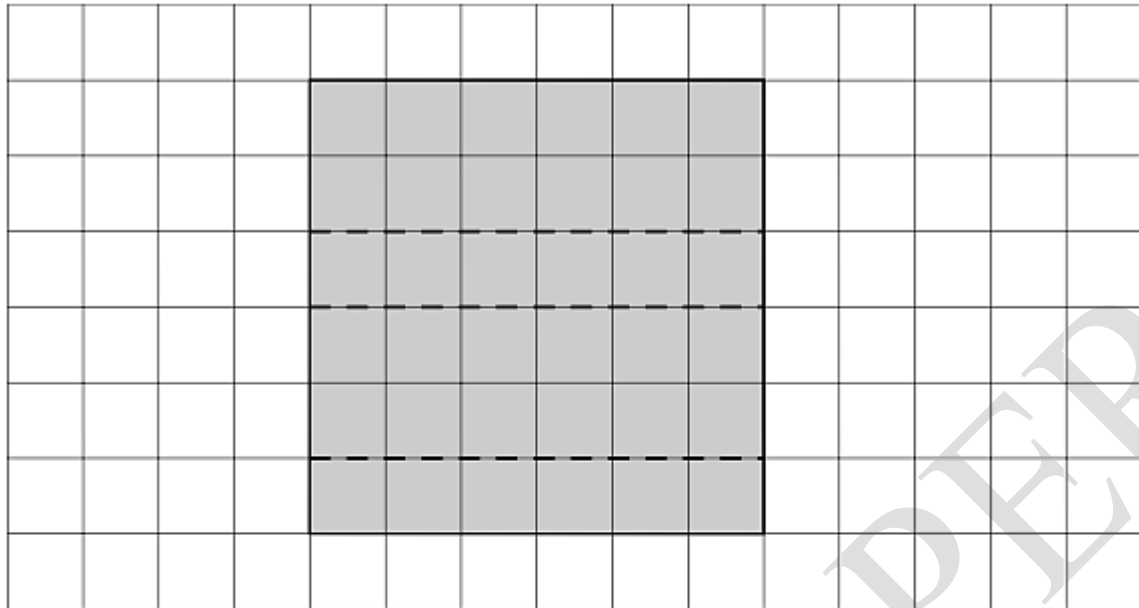
Q4. (a) Simplify $7k - 3m - k - 2m$.

Answer (a) [2]

(b) Solve the equation $2(x - 4) + 3(5 - 3x) = 4$.

Answer (b) $x =$ [3]

Q5.



Part of the net of a cuboid is drawn on the 1 cm square grid above.

(a) Complete the net accurately. [1]

(b) Calculate the volume of the cuboid.

Answer (b) cm³ [1]

(c) Calculate the total surface area of the cuboid.

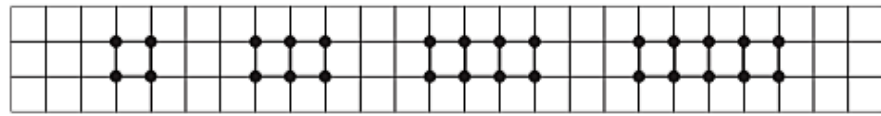
Answer (c) cm² [1]

Q6. Make d the subject of the formula

$$c = kd^2 + e.$$

Answer $d =$ [3]

Q7. (a) Look at the sequence of dots and squares below.



Number of dots	4	6	8	10
Number of squares	1	2	3	4

Find the number of dots when there are

(i) 5 squares,

Answer(a)(i) [1]

(ii) 9 squares,

Answer(a)(ii) [1]

(iii) n squares.

Answer(a)(iii) [2]

(b) Another sequence of dots and squares is shown below.

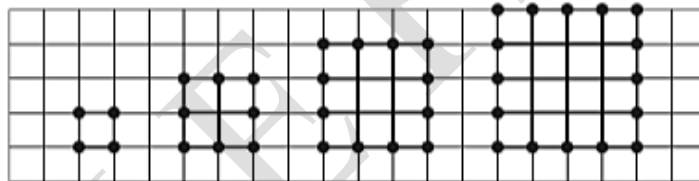


Diagram	1	2	3	4
Number of dots	4	8	12	16
Number of squares	1	4	9	16

(i) For diagram 5, find

(a) the number of dots,

Answer(b)(i)(a) [1]

(b) the number of squares.

Answer(b)(i)(b) [1]