3.a) Find the value

$$15^{\frac{1}{2}} \times 5^{-\frac{1}{2}} \times (3^{\frac{1}{2}})^3$$

[4 marks]

Answer:

(x   )   x   x

x

x   =

3.b)Diagram 13 shows two cylinders P and Q

P
(2m + 5n)g

Q
(m + 3n)g
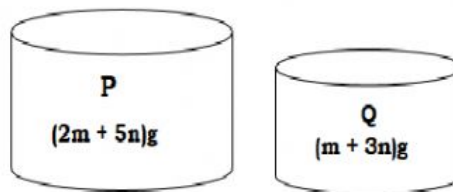
Diagram 13

Calculate the total mass of the 3 cylinder P and 5 cylinder Q, in g.

[2 marks]

Answer:

=   (   ) +   (   )

= (   ) g

4.a)In Diagram 15, shows two parallel lines, OP and QR. Straight line PR is parallel to the y-axis and O is the origin
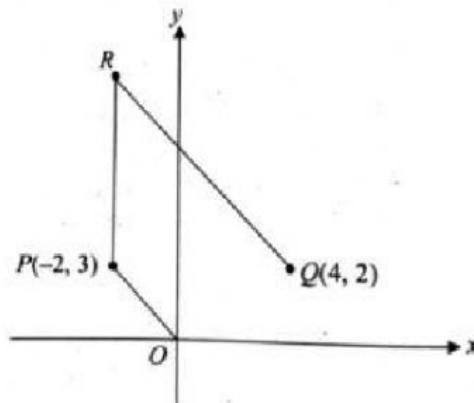

Diagram 15

Find
i)   The equation of the straight line, PR
ii)   The equation of the straight line QR

[4 marks]

Answer:
i)   ii)

          =   gradient QR = _____ = _____

                                        value of c =

                                        straight line equation

                                              = _____

4.b) Diagram 17 shows a square ABCD with three similar circles. The three similar circles are cut out from the square ABCD.
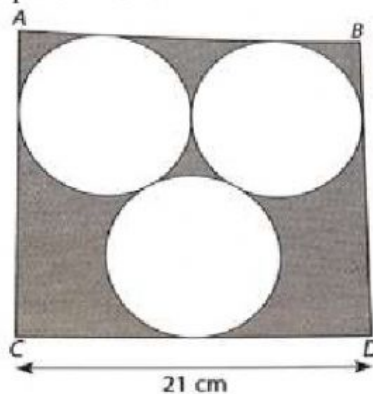

21 cm

Diagram 17

Find the area, in cm², of the remaining region. [Use $\pi = \frac{22}{7}$]
Answer : (write answer in 4 s.f)   [3 marks]

Area of square =   x   =

Area of circle =   x [_____ x   ] =

Area of the shaded region =   =

5.a) Diagram 18 shows a scale drawing of recreation area which consists of a square, an isosceles triangle and a semicircle. The drawing area has the scale drawing of 1:200. The shaded region developed into a playground for the children. Find the actual area of recreation area which does not include the playground.
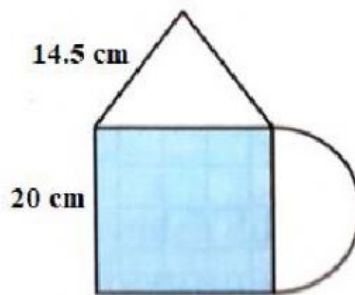[Use $\pi = \frac{22}{7}$]

14.5 cm

20 cm

Diagram 18

[4 marks]

Answer:

Actual length is

14.5 cm =   x   =   m

20 cm =   x   =   m

Height of triangle = $\sqrt{}$ =

Area of triangle = _____ x   x   =

Area of semicircle = _____ x _____ x

Area of the recreation =   =

5.b) Jonathan drives from his office 1540 and reaches Town A at 1600. Then he drives at a speed of 90 km/h to return home.

20 km   **15 km**

Office   **Town A**   **House**
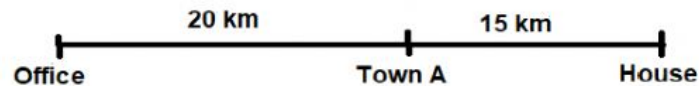
Calculate:
i)   the time he reaches home
ii)   the average speed of the journey.

[3 marks]

Answer:

i)   time reach home =

(in 24 hour time)

ii)   average speed = _____ =   km/h

6.a) Alisha facing a credit card problem. She has balance of RM10000 and just lost her job. The credit card company charges 18% of annual percentage rate (APR), **compounded** daily. Assume that the credit card company allows Alisha to suspend the payment until she get job but the interest still charged. If Alisha needs 1 year to get new job, what is the amount of her credit card debt when she started her job?

[3 marks]

Answers:

$$= \quad\quad x \left(1 + \underline{\quad\quad} \right)^{x}$$

=

6. b) Mr. Kamal bought 10 boxes of oranges for RM24 per box. There are 56 oranges in each box. He found out that for every 40 oranges, there is one bad orange.

i) What is probability of getting a bad orange?

ii) How many oranges are expected to be bad?

Answers:

    i)   probability getting bad orange

       = _____

    ii)   expected bad orange

       = _____ x   x   =

6.c) Factorise:

$$12t^2 + 16t$$

[1 marks]

Answer:

=   (   )