Chapter Name:Jyamithiyum Beejaganithavum *Marks :(2)*
Quest:

(a) Find Slope of the line passing through (3 ,5) , (4 , 7).

(b) What is the slope a line parallel to this line ?

Hint:

a) Slope = 2 (1)

b) Slope of the parallel line = 2 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(2)*
Quest:

Write the equation of the line passing through A (0 ,12) and B (16 , 0)

Hint:

Slope = $\frac{-3}{4}$ (1)

Equation of the line is 3x + 4y = 48 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(3)*
Quest:

The vertices of a triangle are (-3 , 3) , (5 , 3) and (1 , 6) . Prove that it is an isosceles triangle

Hint:

Lengths of sides are 8, 5, 5 (3)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(4)*
Quest:

Consider the points A (1, 0) , B (7 , 0) C (4 , 4)

a). Which of these points are on the x - axis ?

b). Prove that triangle ABC is isosceles.

Hint:

a) A (1 , 0), B (7 , 0) (1)

b) AC = 5, BC = 5 (2)

AB = AC. so it is an isosceles triangle (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(4)*
Quest:

Consider the points L (9, 2) and M (1 , -2)

a). What is the slope of the line LM ?

b). Find the coordinates of two more points on the line

c). Find the coordinates of the point where this line meets the x - axis

Hint:

(a) slope = 12 (1)

(b) For writing other two points (2)

(c) (5 , 0) (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(4)*
Quest:

If A (2,3) and B (6,9) are two points on a line , then

(a) Find the coordinates of the mid point of the line AB

(b) Find the slope of AB

(c) Find the equation of the line having slope $\frac{1}{2}$ and passing through the mid point of AB.

Hint:

(a) (4,6) (1)

(b) $\frac{9-3}{6-2} = \frac{6}{4} = \frac{3}{2}$ (1)

(c) $\frac{y-6}{x-4} = \frac{1}{2}$ (1)

x - 4 = 2y - 12

x - 2y + 8 = 0 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(5)*
Quest:

P (5 , 2), Q (8 , 6) are two points on a line, then

a). What is the slope of PQ?

b). Write the equation of the line PQ

c). Find the co-ordinates of the point at which the line PQ cut the 'x' axis

Hint:

a). slope = $\frac{6-2}{8-5} = \frac{4}{3}$ (1)

b) If (x, y) is a point on the line $\frac{y-2}{x-5} = \frac{4}{3}$ (1)

. 4x - 3y -14 = 0 (1)

c). In the x axis y =0 (1)

4x -14 = 0

x = $\frac{7}{2}$

The point is ($\frac{7}{2}$,0) (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(3)*
Quest:

If the equation of a circle is then

(a)What is the radius of the circle ?

(b) If the x coordinate of a point on this circle is zero, what is the y- coordinate of that point ?

(c) Write the coordinates of another point on the circle.

Hint:

(a) Radius = 2 (1)

(b) when x=0, y = 2 (1)

(c) coordinates of another point = (0,2) , (-2,0) (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(3)*
Quest:

A circle with centre at (1,3) passes through the point (5,6).

(a) Find the radius of the circle?

(b) Write the equation of the circle.

Hint:

(a) Radius of the circle = $\sqrt{(5-1)^2+(6-3)^2} = \sqrt{4^2+3^2} = \sqrt{25} = 5$
(1)

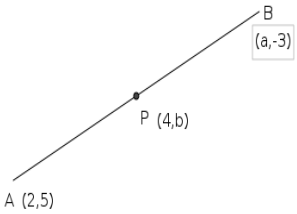
(a) Equation of the circle
(2)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(2)*
Quest:

A (2,5) and B (a,-3) are joined to get the line AB as in the figure and P (4,b) is the mid point of AB

.a) Find the value of a .

b) Find the value of b .



Hint:

a) a = 6 (1)

b) b = 1 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(4)*
Quest:

The equation of a circle is

(a) Find the radius of the circle ?

(b) Write the coordinates of the centre of the circle .

(c) Find the points of contact of the circle with X axis.

Hint:

Radius = 3 cm (1)

Centre is (0,0) (1)

Points of intersection with the x axis (3,0), (-3, 0) (2)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(4)*
Quest:

A (2,3) B (6,7) are two points on a line .

(a) Find the slope of AB.

(b) If P is the mid point of AB , then find the coordinates of P.

(c) Write the equation of the line AB.

Hint:

slope = $\frac{7-3}{6-2} = \frac{4}{4} = 1$ (1)

Co-ordinates of P = ($\frac{2+6}{2}$, $\frac{3+7}{2}$) = (4,5) (1)

Equation of AB $\frac{y-3}{x-2} = 1$ (1)

x - y + 1 = 0 (1)

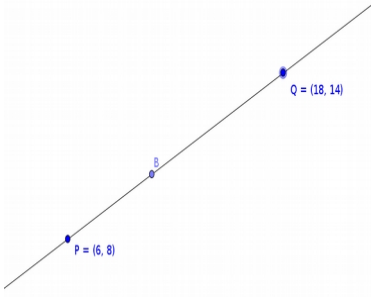
Chapter Name:Jyamithiyum Beejaganithavum *Marks :(2)*
Quest:

In the figure PB : QB = 1 : 2. Find the coordinates of the point B

Hint:

x coordinate of B is $6+\frac{1}{3}(18-6)=10$ (1)

y coordinate of B is $8+\frac{1}{3}(14-8)=10$ (1)

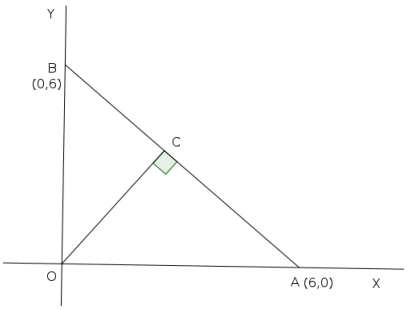


Chapter Name:Jyamithiyum Beejaganithavum *Marks :(5)*
Quest:

In the figure, OC is perpendicular to AB.(a) Prove that Δ OAB is isosceles ?

(b) Find the coordinates of C ?

(c) Write the equation of the line OC.



Hint:

(a) OA = 6 ,OB = 6 (1)

So triangle OAB is isosceles (1)

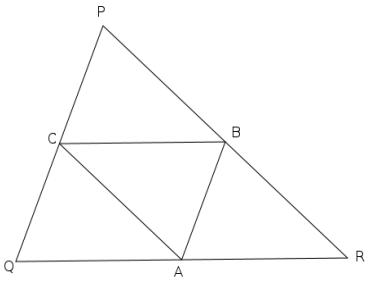
(b) C (3,3) (1)

(c) For writing the equation x = y or x – y = 0 (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(3)*
Quest:

In the figure A , B , C are the mid points of QR , PR , and PQ respectively

.A (2,4) R (5,5) B(4,7) .Then write the coordinates of P , Q , and C.



Hint:

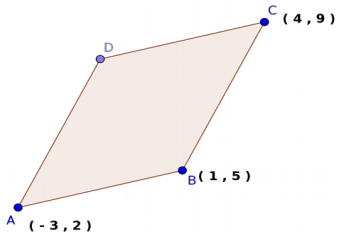
C (1, 6) (1)

Q (-1, 3) (1)

P (3, 9) (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(5)*
Quest:

The vertices of the parallelogram ABCD are A (-3 , 2) , B (1 , 5) ,C (4 , 9) Then



(a) Write the coordinates of D?(b) Find the length of AB and AD

(c) Calculate the area of the parallelogram ?

Hint:

(a) D = (0 , 6) (1)

(b) AB = $\sqrt{4^2+3^2}$ = 5 AD = $\sqrt{3^2+4^2}$ = 5 (1)

ABCD is a rhombus (1)

AC = $\sqrt{7^2+7^2}$ = 7 $\sqrt{2}$ BD = $\sqrt{1^2+1^2}$ = $\sqrt{2}$ (1)

Area = $\frac{1}{2}$ x 7 $\sqrt{2}$ x $\sqrt{2}$ = 7 sq.unit (1)

Chapter Name:Jyamithiyum Beejaganithavum *Marks :(2)*
Quest:

In the figure ABCD is a parallelogram. Write the coordinates of point C

Hint:X coordinate of point C = 9 + 6 - 4 = 11 (1)

Y coordinate of point C = 8 + 6 - 2 = 12 (1)

Coordinates of point C = (11,12)