

Answer on Question #56372 - Math - Analytic Geometry

Find y so that the length of the segment joining $P(-2, 1)$ and $Q(3, y)$ is square root of 34.

Length of the segment is $L = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$, respect to P,Q:

$$\sqrt{34} = \sqrt{(3 - (-2))^2 + (y - 1)^2}$$

$$34 = 25 + (y - 1)^2$$

$$y - 1 = \pm 3$$

Then, $y=4$ or $y=-2$

Answer: $y= 4$

$y= -2$