Quiz 13

Матн-1150-es32

Consider the points (3, -4) and (5, 4) in the cartesian real number plane.

1 What is the distance between these points? (Show what numerical calculation you make.) The distance is

$$\sqrt{\left((5) - (3)\right)^2 + \left((4) - (-4)\right)^2} = \sqrt{(2)^2 + (8)^2} = \sqrt{(4) + (64)} = \sqrt{68} = 2\sqrt{17}.$$

2 What is the midpoint between these points? (Show what numerical calculation you make.) The midpoint is

$$\left(\frac{(3)+(5)}{2},\frac{(-4)+(4)}{2}\right) = \left(\frac{8}{2},\frac{0}{2}\right) = (4,0).$$