When points do not fall on horizontal or vertical lines, you can't count blocks...must use *The Distance Formula*.

To find the distance between $A(x_1,y_1)$ and $B(x_2,y_2)$

$$AB = \sqrt{(x_1-x_2)^2 + (y_1-y_2)^2}$$

Round to 10th

Big x - Small x Big y - Small y

Example 1

Find the distance between R(- 2, 6) and S(1, - 3)

Big Big

$$RS = \sqrt{(1+2)^2+(6+3)^2} = \sqrt{3^2+9^2} = \sqrt{9+81}$$

$$\sqrt{81} \quad \sqrt{100} \quad \sqrt{90} =$$

$$9 \quad 10 \quad \approx 9.5$$

Example 2

Find the distance between P(-3, 8) and Q (- 1, - 5)

Big Big

(x, y) (x, y)

$x = -3$

$x = -1$

$y = 8$

$y = -5$

diff of x's diff of y's

$$PQ = \sqrt{(-1+3)^2+(8+5)^2}$$

$$\sqrt{2^2+13^2} = \sqrt{4+169} = \sqrt{173} \approx 13.2$$