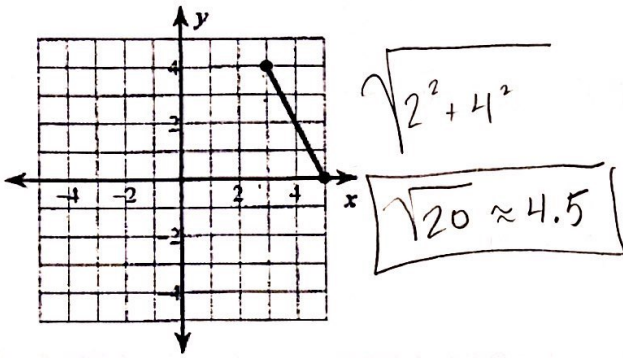


Key

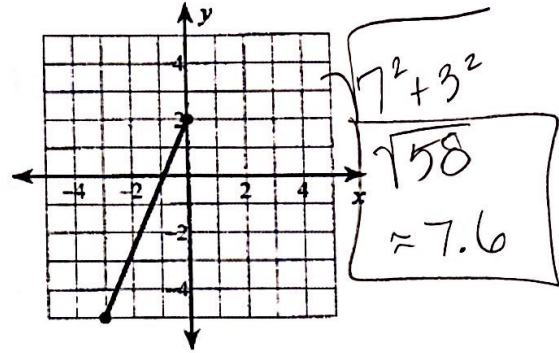
5.3 Distance Formula Practice

Find the distance between each pair of points.

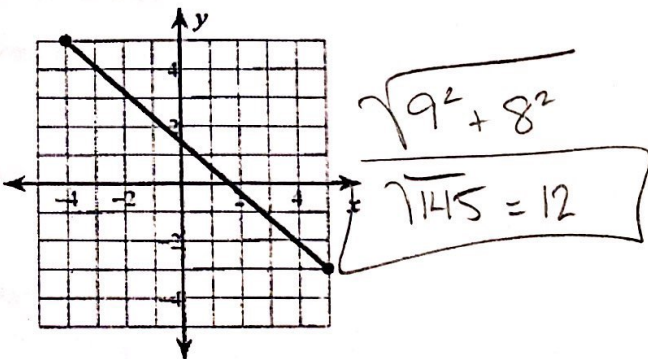
1)



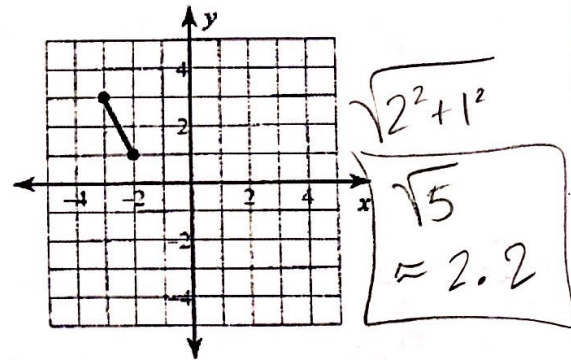
2)



3)



4)

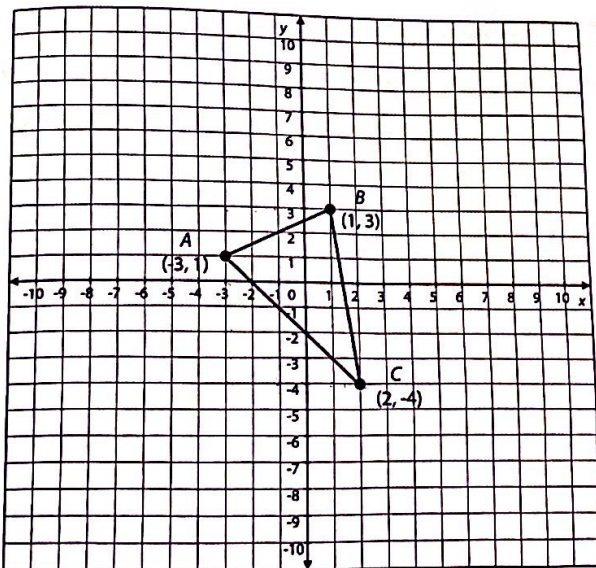


5. Tyler and Arsha have mapped out locations for a game of manhunt. Tyler's position is represented by the point $(-2, 1)$. Arsha's position is represented by the point $(-7, 9)$. Each unit is equivalent to 100 feet. What is the approximate distance between Tyler and Arsha?

$$d = \sqrt{(-2-7)^2 + (1-9)^2}$$

$$d = \sqrt{5^2 + 8^2} = \sqrt{89} \approx 9.4 \times 100 = 940 \text{ ft}$$

6. Find the perimeter of the triangle.



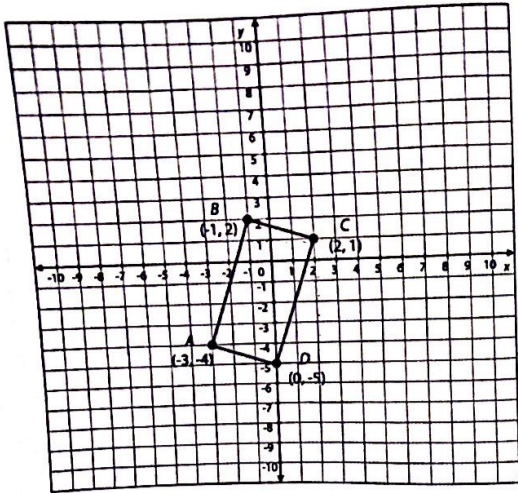
$$AB = \sqrt{2^2 + 4^2} = \sqrt{20} = 4.5$$

$$BC = \sqrt{7^2 + 1^2} = \sqrt{50} = 7.1$$

$$AC = \sqrt{5^2 + 5^2} = \sqrt{50} = 7.1$$

$$P = 18.7 \text{ units}$$

Find the area of the rectangle.



$$A = L \cdot W = 20 \text{ units}^2 \text{ or } 20.2$$

$$BC = \sqrt{3^2 + 1^2} = \sqrt{10} = 3.2$$

$$CD = \sqrt{6^2 + 2^2} = \sqrt{40} = 6.3$$

8. Each unit on the map is equivalent to 1,000 feet. Round your answers to the nearest foot. Find the distance from the:

A. Post office to the bank

$$\sqrt{3^2 + 5^2} = \sqrt{34} \approx 5.8 \rightarrow 5800$$

B. Marina to the school

$$\sqrt{7^2 + 7^2} = \sqrt{98} \approx 9.9 \rightarrow 9900$$

C. Park to the farmer's market

$$\sqrt{1^2 + 6^2} = \sqrt{37} \approx 6.1 \rightarrow 6100$$

D. Farmer's market to the bank

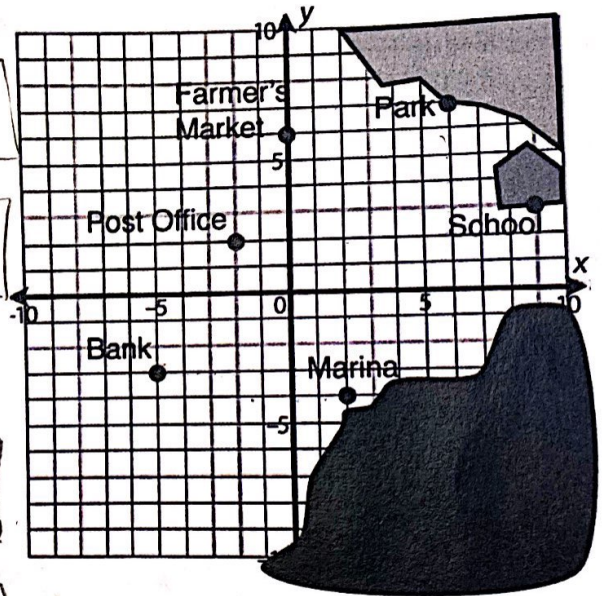
$$\sqrt{9^2 + 5^2} = \sqrt{106} = 10.3 \rightarrow 10,300$$

E. Bank to the park

$$\sqrt{11^2 + 10^2} = \sqrt{221} = 14.9 \rightarrow 14,900$$

F. Marina to the farmer's market.

$$\sqrt{2^2 + 10^2} = \sqrt{104} = 10.2 \rightarrow 10,200$$



9. The local recreation department has created a map of its newest baseball field. The department is planning to install a rectangular fence around the field. The corners of the field are represented on the map by the points A(-5, -10), B(-15, -5), C(4, 23), D(-11, 18). How many feet of fencing are needed for the baseball field? What is the area of the fenced-in field? Each unit on the map represents 10 feet.

AB

BC

CD

AD

$$\begin{array}{r} \sqrt{15^2 + 5^2} \\ \sqrt{250} \\ 15.8 \end{array}$$

$$\begin{array}{r} \sqrt{6^2 + 28^2} \\ \sqrt{820} \\ 28.6 \end{array}$$

$$\begin{array}{r} \sqrt{(-15)^2 + (-5)^2} \\ \sqrt{250} \\ 15.8 \end{array}$$

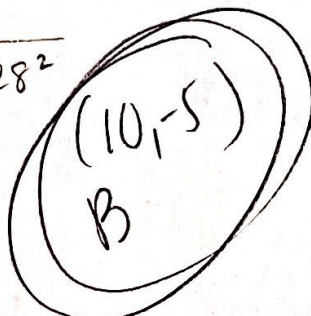
$$\begin{array}{r} \sqrt{(-6)^2 + 28^2} \\ \sqrt{820} \\ 28.6 \end{array}$$

$$\sqrt{15^2 + 5^2}$$

$$P = 91.9$$

$$\sqrt{6^2 + 28^2}$$

$$A =$$



$$P = 88.8$$

$$A = 451.88$$