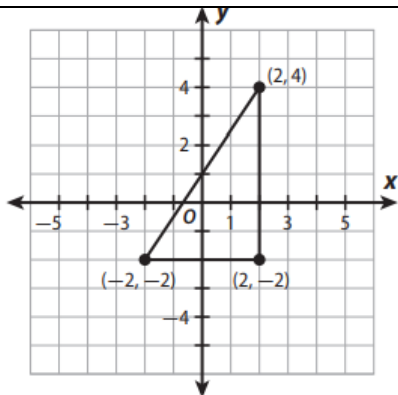


Name: \_\_\_\_\_ Teacher: \_\_\_\_\_ School: \_\_\_\_\_

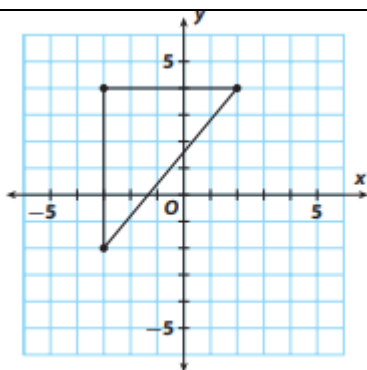
**Grade 8: Lesson 18** Distance Between Two Points

Complete the following exercises. You may use a calculator as needed.

Using the Distance Formula, approximate the length of the hypotenuse of the right triangle to the nearest tenth of a unit.

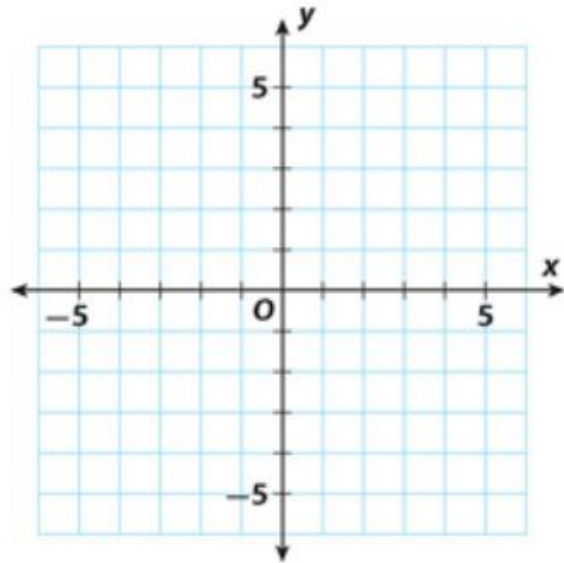


1.



2.

3. The coordinates of the vertices of a rectangle are given by  $R(-3, -4)$ ,  $E(-3, 4)$ ,  $C(4, 4)$ , and  $T(4, -4)$ . Plot these points on the coordinate plane and connect them to draw the rectangle. Then connect  $E$  and  $T$  to form diagonal  $ET$ .



4. Use the **Pythagorean Theorem** to find the exact length of  $ET$  in Problem 3. (Hint: Find the number of units in each leg of one of the triangles created when you drew the diagonal.)

5. Use the **Distance Formula** to find the length of  $ET$  in Problem 3. (Hint: Use the coordinates of two of the vertices of one of the triangles created when you drew the diagonal. You should get the same measurement as you did in problem 4.)

6. Find the distance between  $P(-2, 5)$  and  $Q(-7, -5)$ .

7. Find the distance between P(-2, 5) and R (2, -3).	
8. Find the distance between Q (-7, -5) and R(2, -3).	
9. If the points P, Q, R, represent ship locations on a coordinate grid, which ships are the farthest apart?	

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