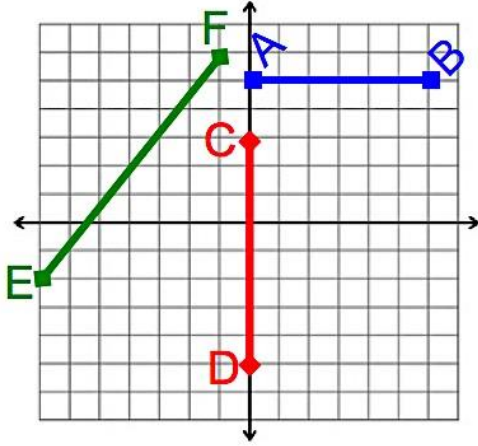Aim: How can we find the length of a line segment?

Do Now: Find the length of each line segment below. Show/explain the process you took to find the length of each line.

AB:

CD:

EF:

*How did you calculate the length of AB and CD? Can you use the same method to calculate EF? Why/Why not?
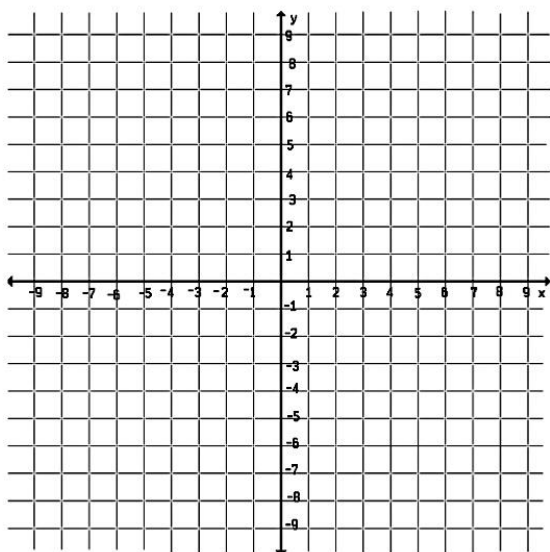
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DISTANCE FORMULA

Find the distance between the points below. Leave your answer in simplest radical form.

1. (0, -2) and (-5, -1)   2. (-6, 4) and (-5, 1)

3. Triangle ABC has coordinates A (-6,2), B(-3,6), and C (5,0). Find the perimeter of the triangle. Express your answer in simplest radical form.
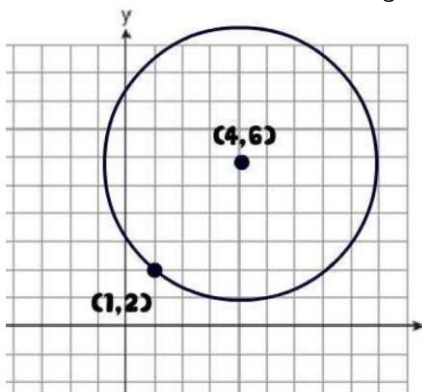

Practice Problems...yeah!
(Round all answers to the nearest tenth where necessary)

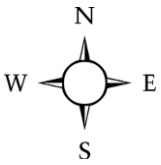1. Find the length of the line segment whose endpoints are (-8,7) and (6,4).

2. The point (1,2) lies on a circle. What is the length of the radius of this circle if the center is located at (4,6)?

3. Line segment AB has endpoints A(0, -6) and B(5, 6). Line segment CD has endpoints C(-8, 2) and D(4, 7). Are these segments congruent? How do you know?

4. The point (-3,3) lies on a circle. If the center is located at (10,6) what is the length of the diameter of this circle?

5. One bus is 5 miles east and 2 miles north of the bus terminal. Another bus is 3 miles west and 6 miles south of the terminal. How far apart are the buses?

N

W — E

S

6. Find the perimeter of triangle VUW.

U(3, −3)

V(1, −8)   W(5, −8)