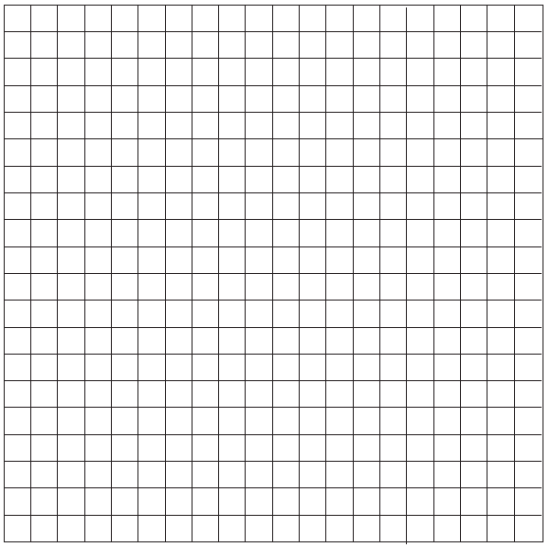
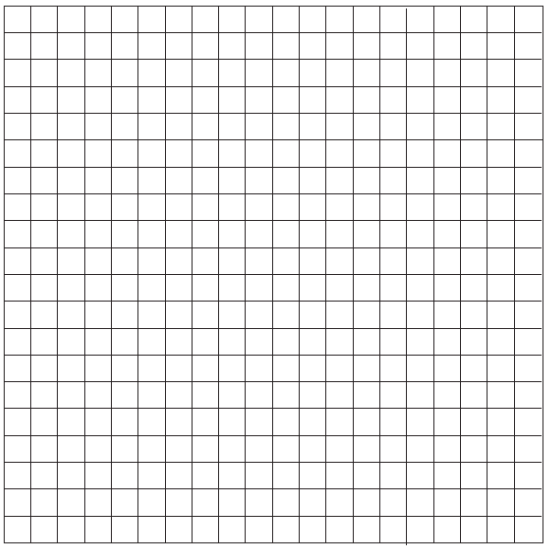
Presenter: Eric Butterbaugh
Bread & Roses High School

Exploring the Distance Formula

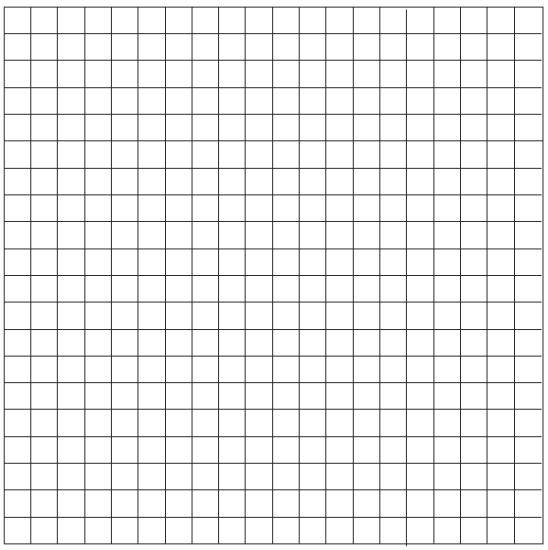
1.) One house is 12 miles east of a school. Another house is 9 miles north of the school. How far apart are the houses?



2.) Two hikers started at the same location. One traveled 2 miles east and then 1 mile north. The other traveled 1 mile west and then 3 miles south. At the end of their hikes, how many miles apart are the two hikers?



3.) Katrina hikes 5 miles north, 7 miles east, and then 3 miles north again. To the *nearest tenth of a mile,* how far, in a straight line, is Katrina from her starting point?



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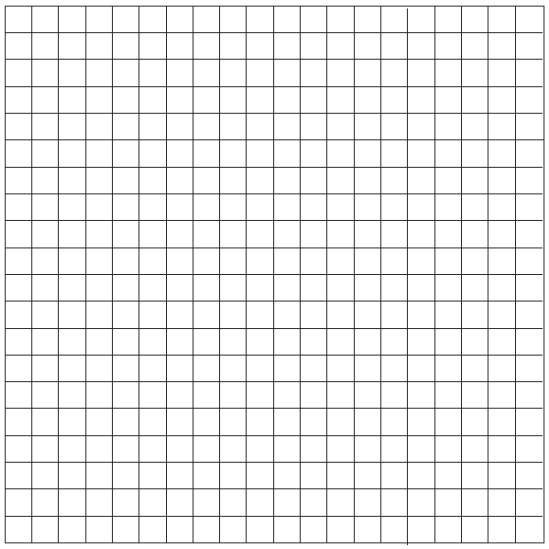
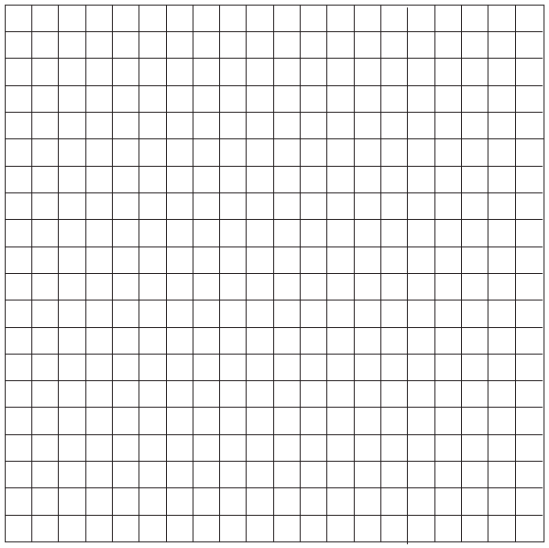
4.) Without using the accompanying graph paper, find the distance between (3,-2) and (-1,5) to the nearest tenth.



5.) Without using the accompanying graph paper, find the distance between (4,0) and (2,-1) to the nearest tenth.



6.) Create your own method for finding the distance between 2 points without graph paper. You may wish to consider the following questions:

a.) How do we calculate slope without graph paper? (You may wish to revisit the Do Now)

b.) How can we determine the lengths of the legs without graph paper?

Describe your method below, and verify that it works on the previous 2 examples.