

## Shortest Distance Activity

“Let’s go hiking!!! We will meet at noon at the old fort next to the place by the tree, you know the one!” This is how all adventures gone awry start. Tom and Jim do meet at noon at the old fort next to the place by the tree and head off on a hike. They are having a lovely time enjoying the fall colors and crisp air. Off in the distance Tom hears the call of a turkey. “Jim, let’s go find that turkey!” says Tom. Jim replies, “I don’t want to chase a turkey. Why are you so obsessed with turkeys Tom?”. “Fine, I’ll go chase it myself and meet you later.” says Tom as he disappears into the woods.

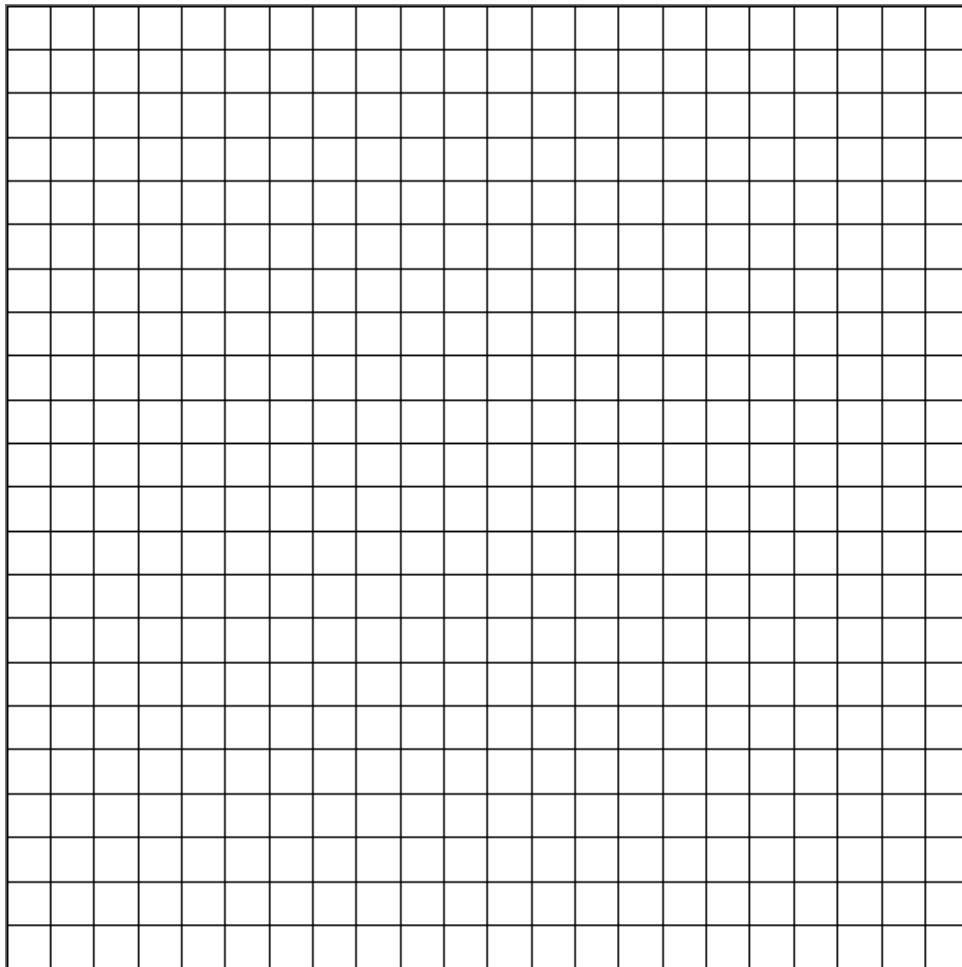
Thirty minutes later and Tom is nowhere to be found. Should Jim head back to the fort? Should he head in the direction that Tom took off running? Should he just stay put? Dang that Tom and his turkey chasing!!

Here is what we do know at 1 pm:

Tom is currently 1.5 miles east and 0.4 miles north of the old fort.

Jim is sitting on a rock 1.2 east and 0.8 miles south of the old fort.

1. Draw a graph with the old fort at the origin. Let each line on the graph represent one tenth of a mile. Mark the location of Tom on the graph with the point T and the location of Jim with the point J. (Think ahead before drawing the x and y axis.)



2. Find the distances to the nearest tenth of a mile between the following and label them on your graph.

- a) Jim and the fort
- b) Tom and the fort
- c) Jim and Tom

3. Tom is traveling 2 miles per hour due north still chasing that turkey.

- a) Find Tom's location at 1:30 and label it  $T_2$  on your graph.
- b) How far apart will he and Jim be at 1:30 pm?
- c) How much further apart will Jim and Tom be at 1:30 pm than they were at 1 pm?