

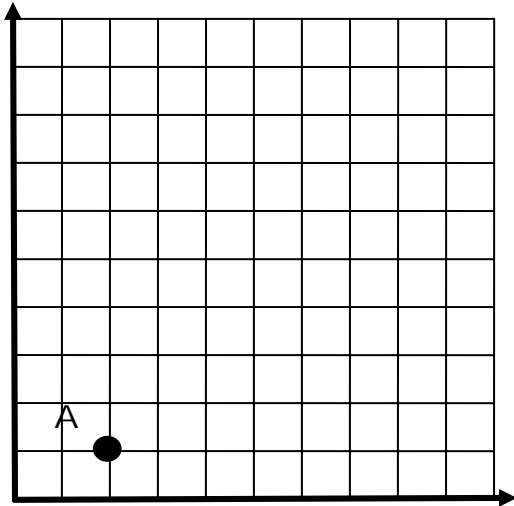
PROBLEM-OF-THE-DAY: ALGEBRA 1**WEEK:** January 8 to January 11**DAY:** Wednesday

RISD Objective: Given two points in the coordinate plane, students will be able to determine the coordinates of the midpoint of the segment connecting the points, the slope of the line that passes through the points, and the distance between the points.

PROBLEM #79

George travels from point A. He travels 60 miles north, 40 miles east, and then 30 miles south.

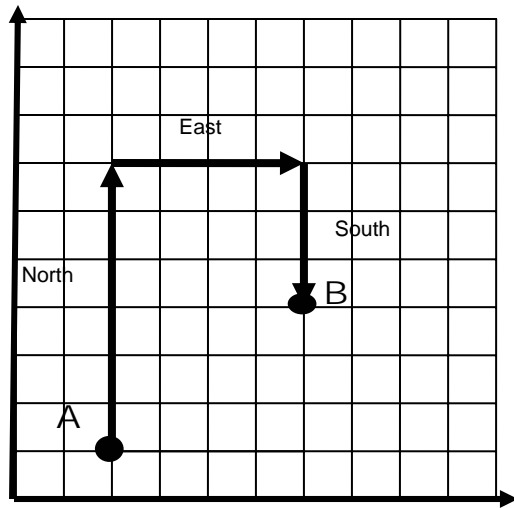
- 1) **Decide on a scale for your drawing and draw George's route on the grid below.**
- 2) **Find the straight line distance from George's starting point, A, to his final spot, B.**



MODEL SOLUTION #79

Using the grid, draw the paths and label the missing points.
 From point A, count up 6 spaces, turn east 4 spaces and then turn south 3 spaces. This is the resulting point of B.

1) Scale: 1 square = 10 miles



B had the coordinates: (60, 40)

USE THE DISTANCE FORMULA: $D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

2) A (20, 10) B (60, 40)

$$AB = \sqrt{(60 - 20)^2 + (40 - 10)^2} = \sqrt{40^2 + 30^2} = \sqrt{1600 + 900} = \sqrt{2500} = 50$$

Point B is 50 miles from point A.