Distance and Midpoint Mini-Project

The grid shows the locations of a sandbox and a fountain in a park. Each grid square represents one square meter.

1. Which formula would be used to calculate the distance between the sandbox and the fountain? (1 point)
   A. $\frac{y_2 - y_1}{x_2 - x_1}$
   B. $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
   C. $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$
   D. $a^2 + b^2 = c^2$

2. Compute the distance from the sandbox to the fountain. Show your work and express your answer as a decimal rounded to the nearest tenth. Label your answer with the correct units. (3 points)

You decide to meet your friend half-way between the fountain and the sandbox.

3. Which of the above formulas would be used to calculate this location? (1 point)

4. Calculate this point. Show your work. Plot and label it M on the grid. (3 points)

The swings are located at (-4, 7), which is half-way between the sandbox and the slide.

5. Plot and label the location of the swings with the point W. (1 point)

6. Calculate the location of the slide. Show your work. (2 points)

7. Plot and label the location of the slide with the point L. (1 point)

8. Calculate the distance between the slide and the fountain. Show your work and express your answer as a decimal rounded to the nearest tenth. (3 points)