Match the Graph – *Distance Match*
Make an accurate drawing of the graph from your Distance Match.

1. What physical property is represented along the x-axis? _____________________________
   What are the units? ___________ How far apart are the tick marks? ________________

2. What physical property is represented along the y-axis? _____________________________
   What are the units? ___________ How far apart are the tick marks? ________________

3. How far from the wall do you think you should stand to begin? _______________________

4. Did you start too close, too far or just right? _____________________________

5. Should you walk forward or backward for a segment that slopes up? ________________
   Why? ___________________________________________________________________

6. Should you walk forward or backward for a segment that slopes down? _________________
   Why? ___________________________________________________________________

7. What should you do for a segment that is flat? _____________________________
   Why? ___________________________________________________________________

8. For which segment did you have to move the fastest? _______________________________
   Why? ___________________________________________________________________

9. For which segment did you have to move the slowest? _______________________________
   Why? ___________________________________________________________________
10. What physical property does the slope, or steepness of the line, represent? ______________

11. For the first segment, how many meters did you walk in how many seconds? ________________

12. How far did you actually walk overall? ____________________________________________

13. Sketch a graph that would match the description

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A  Start one meter away from the motion detector. Walk slowly away from the motion detector for about 3 seconds, stand still for about 4 seconds, and then walk quickly away from the motion detector for about 3 seconds.

B  Start 3 meters away from the motion detector, and walk away from it at a moderate rate for about 3 seconds. Stand still for about 4 seconds, and then walk quickly toward the motion detector for 3 seconds.

C  Start 2 meters away from the motion detector, and walk toward it at a moderate rate for about 3 seconds. Stand still for about 4 seconds, and then walk toward the motion detector at about the same moderate rate as earlier for about 3 seconds.