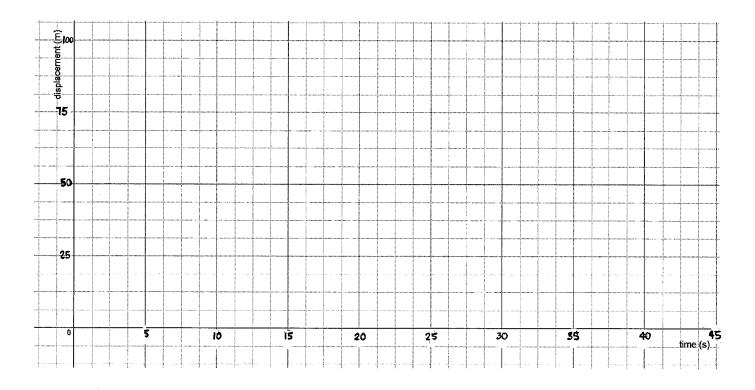
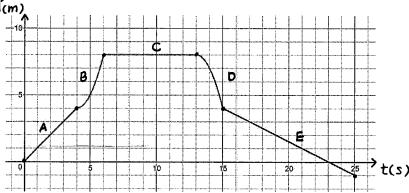
1. Draw a displacement vs. time graph for a runner who goes at $5\,\text{m/s}$ for $10\,\text{seconds}$, then at $2\,\text{m/s}$ for $20\,\text{seconds}$, then at $-9\,\text{m/s}$ for $10\,\text{seconds}$. Clearly label the velocities on the graph. Clearly label the runner's displacement at $10\,\text{seconds}$, $30\,\text{seconds}$, and $40\,\text{seconds}$.

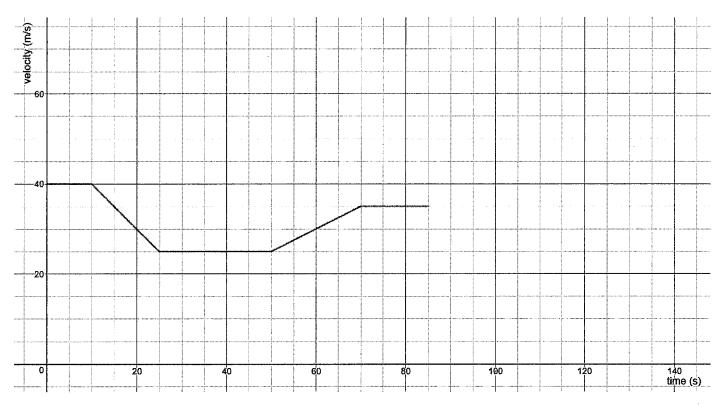


2. What is the runner's total distance in #1? What is the runner's total displacement in #1?

3. Describe the object's motion in the following displacement vs. time graph.



4. Given the following velocity vs. time graph, determine the total displacement of the object. Show your work on the graph and circle your final answer.



5. Calculate the object's acceleration for each section of the velocity vs. time graph in #4.

6. Given the following velocity vs. time graph, draw the corresponding displacement vs. time graph. Show all of your displacement calculations on the v vs t graph. Clearly label the velocities and displacements on the d vs. t graph.

