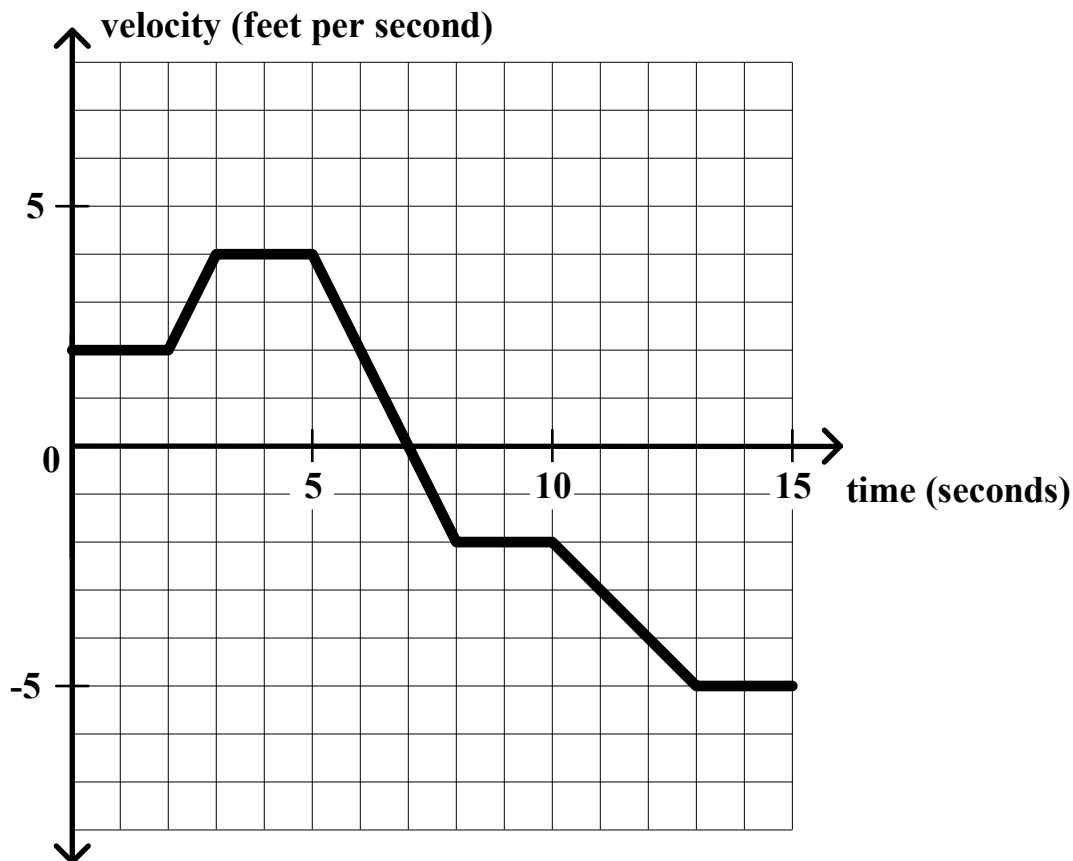## Advanced Challenge Level 2 Problem #11 _____

A particle is moving on a straight line. The graph below shows the velocity of the particle (in feet per second) as a function of time (in seconds). Assume that the particle is moving to the right when the velocity is positive and to the left when the velocity is negative.

Your job for this problem is to answer two questions.

♦ 1. What is the total distance moved by the particle during this 15 second time period?

♦ 2. How far is the particle from its starting position at the end of this 15 second time period?

Make sure that you clearly describe the process that you used to arrive at your answers.