Constant Speed Problems

1. Mr. Bradford walks around a 400 meter track in 5 minutes.
   a. What is his speed in m/s?

   b. If he continues with the same speed, how long will it take him to complete four laps?

   c. How long will it take Mr. Bradford to walk one kilometer at this pace?

2. A car travels with a constant speed of 30 m/s for 1/2 hour. How far does it travel?

3. A hiker travels for 40 minutes with a constant speed of 1.25 m/s.
   a. What distance does he cover during this time?

   b. If the hiker walked twice as fast, how long would it take him to walk the same distance?

4. Liam stands at the rim of the Grand Canyon and yodels down to the bottom. He hears his yodel echo back from the canyon floor 5.20 s later. Assume that the speed of sound is 340 m/s. How deep is the canyon at this location?

5. Imagine you have a constant speed and that you travel 100 meters in some amount of time.
   a. If you traveled for twice as long, how far would you travel?

   b. If you traveled four times as long, how far would you travel?

   c. What if you only travled for half the time - how far would go?

6. Imagine you have to travel a certain fixed distance and that it took you 30 minutes to go that distance with a certain constant speed.
   a. If you went twice as fast, how long would it take?

   b. If you went with 1/3 of the speed, how long would it take?

   c. If you went 2.5 times as fast, how long would it take?

Answers: 1. a) 1.33 m/s b) 20 minutes c) 750 seconds 2) 54,000 m 3. a) 3000 m b) 20 min
4) 884 m 5. a) 200 m b) 400 m c) 50 m 6. a) 15 min b) 90 min c) 12 min