

**For each question, your solution must
show work/calculations and display/explain your reasoning.**

1. A battery-powered toy car moves at constant speed in a straight line, traveling 2 meters in 8 seconds.
- a) The car travels for 3 seconds at this same speed in a straight line. How far does it travel in this 3 seconds?

- b) The car travels for 3 meters at this same speed in a straight line. How long does this 3 meter trip take?

2. A cell phone plan charges a monthly fee of \$50 *plus* \$0.20 per minute.

- a) You used 200 minutes last month. How much does this cost?

- b) The month before that, you spent \$100. How many minutes did you use?

3. A ball travels 10 meters to the right (in a straight line), bounces straight back off a wall, and travels 4 meters to the left (in a straight line). This takes a total time of 5 seconds.

a) Determine the total distance traveled by the ball as well as the ball's displacement.

total distance =	displacement =
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b) Determine the ball's average speed and average velocity.

average speed =	average velocity =
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4. $f(x)$ is a linear function that goes through the points (1, 9) and (3, 5).

a) Determine the slope of the line.

b) Determine $f(1)$.