Lesson 2.5.2: Solving Problems Involving Linear Functions

How to Solve Problems Involving Linear Functions?

1. Understand and analyze the problem.
   a. Determine the dependent variable $f(x)$ and independent variable x in the problem.
   b. Determine the initial state b of the dependent variable.
   c. Compute for the slope.
2. Use the facts of the problem to form a linear function.
3. Graph the linear function.

Practice Exercises 2.5.2

Solve each problem completely.

1. It has been observed that a particular plant's growth is directly proportional to time. It measured 2 cm when it arrived at the nursery and 2.5 cm exactly one week later. If the plant continues to grow at this rate, determine the function that represents the plant's growth and graph it.
2. Mang Canor often rides a bus when going to work. The standard fare in riding a bus is ₱15 as a flag-down rate plus ₱2 for every kilometer or a fraction of it. Determine the function that represents the fare and graph it.
3. A parking lot service charges ₱25 for the first hour and ₱10 for every hour additional or a fraction thereof. How much will Jordi have to pay if he parked for 8 hours? Write a rule that best describes the problem and draw its graph using any method.

Activity 2.5.2

Solve each problem completely.

1. Miss Khalifa often rides a taxi from one place to another. The standard fare in riding a taxi is ₱40 as a flag-down rate plus ₱5 for every 200 meters or a fraction of it. Determine the function that represents the fare and graph it.
2. A pay phone service charges ₱5 for the first three minutes and ₱1 for every minute additional or a fraction thereof. How much will Mang Canor have to pay if his call lasts for 8 minutes? Write a rule that best describes the problem and draw its graph using any method.
3. Miss Leone drives at a constant rate of 60 kph. If her destination is 240 kilometers away from her starting point, how many hours will it take her to reach her destination? Write a rule that best describes the problem and draw its graph using any method.

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