Finding the Slope and the Average Rate of Change

Name_____ Period:_____ Date:_____

Directions: Use the information given to solve each problem.

1. A linear function passes through (−3,8) and (5,−4). What is the slope of the function?

2. A linear function passes through (1, −7) and (6, 3). What is the slope of the function?

3. A linear function passes through (−4, 15) and (2,−3). What is the slope of the function?

4. A linear function passes through (0, −2) and (8, 10). What is the slope of the function?

5. The table below shows the linear relationship of water level in a pool and time.

Time (hr)	Water Level (ft)
0	15
10	55
20	95
30	135

Determine the rate of change of the water level in feet per hour.

6. Juan's has been saving money for months to so that he can open a stock account.

Juan's Saving Plan

# of Months Saving	Balance
1	$15
3	$45
5	$75
7	$105
9	$135

Determine the rate of change of the Juan's saving account in dollars per month.

7. The table below shows the linear relationship between the number of dollars earned over time.

Number of Hours (h)	Dollars Earned (d)
8	$50.00
15	$93.75
19	$118.75
30	$187.50

Determine the rate of change in dollars per hour.

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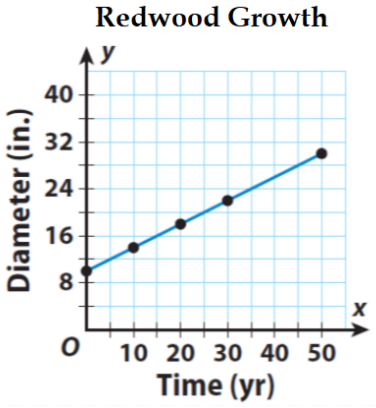
8. The graph below shows the proportional relationship between diameter of a Redwood Tree and the number of years since it was first observed.



Select the statement that correctly reflects what is shown in the graph.

A. The slope of the line is $\frac{4}{10}$, so the diameter of the tree will increase 0.4 inches per year.

B. The slope of the line is $\frac{4}{10}$, so the diameter of the tree will increase 10 inches every 4 years.

C. The slope of the line is $\frac{10}{4}$, so the diameter of the tree will increase 2.5 inches per year.

D. The slope of the line is $\frac{10}{4}$, so the diameter of the tree will increase 10 inches every 4 years.

Finding the Slope and the Average Rate of Change

Name_____ Period:_____ Date:_____

Answer Key

Directions: Use the information given to solve each problem.

1. A linear function passes through (−3,8) and (5,−4). What is the slope of the function?

Slope is -1.5

2. A linear function passes through (1, −7) and (6, 3). What is the slope of the function?

Slope is 2

3. A linear function passes through (−4, 15) and (2,−3). What is the slope of the function?

Slope is -3

4. A linear function passes through (0, −2) and (8, 10). What is the slope of the function?

Slope is 1.5

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5. The table below shows the linear relationship of water level in a pool and time.

Time (hr)	Water Level (ft)
0	15
10	55
20	95
30	135

Determine the rate of change of the water level in feet per hour.

The Rate of Change is 4

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6. Juan's has been saving money for months to so that he can open a stock account.

Juan's Saving Plan

# of Months Saving	Balance
1	$15
3	$45
5	$75
7	$105
9	$135

Determine the rate of change of the Juan's saving account in dollars per month.

The Rate of Change is 15

7. The table below shows the linear relationship between the number of dollars earned over time.

Number of Hours (h)	Dollars Earned (d)
8	$50.00
15	$93.75
19	$118.75
30	$187.50

Determine the rate of change in dollars per hour.

The Rate of Change is 6.25

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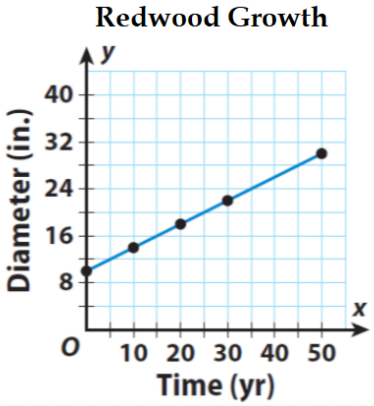
8. The graph below shows the proportional relationship between diameter of a Redwood Tree and the number of years since it was first observed.



Select the statement that correctly reflects what is shown in the graph.

A. The slope of the line is $\frac{4}{10}$, so the diameter of the tree will increase 0.4 inches per year.

B. The slope of the line is $\frac{4}{10}$, so the diameter of the tree will increase 10 inches every 4 years.

C. The slope of the line is $\frac{10}{4}$, so the diameter of the tree will increase 2.5 inches per year.

D. The slope of the line is $\frac{10}{4}$, so the diameter of the tree will increase 10 inches every 4 years.

A