Warm Up

11/5/18

1. For f(x) = 4x - 7, what is the average rate of change for $-3 \le x \le 2$

$$f(-3) = 4(-3) - 7$$

 $f(-3) = 4(-3) - 7$
 $f(2) = 4(2) - 7 = 1$
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2. Compare the slope of f(x) = -1/4(8x - 10) to the table below, what kind of slope do each have?

3. Write the equation of the line that passes through (5, 2) and (13, 18)

$$M = \frac{18 - 2}{13 - 5} = \frac{16}{8} = \frac{12}{2}$$

$$y = \frac{1}{3} = \frac{16}{8} = \frac{12}{2}$$

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$$y = \frac{1}{2} = \frac{1}{2} \times \frac{10}{2}$$



Finding Slope Application:

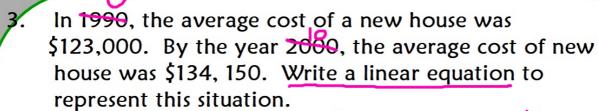
1. If 3 movie tickets cost \$26.25 and 5 cost \$43.75, what would one movie ticket cost?

(3,26.25) 43.75-26.25_ 17.50 (5,43.75) 5-3 + 275

2. If I paid \$17,500 in 2005 for my car brand new Hicket and in 2010 it is worth \$5000. What is the yearly depreciation?

(0,17500) $5000-17500_{-12500}$ (5,5000) (5,5000) (5,5000) (5,5000)

Decreases \$2500 peryn yr



$$(0, 123000)$$
 $134150-123000_{11150} $ = 1115 per
 $(10, 134150)$ $4=115\times +123.000$ $yr$$

4. In 1995 the average price of movie ticket was \$5.00. In 2010 the average cost a movie ticket is \$10.00. Write an equation to represent this situation.

$$\frac{(0,5)}{(15,10)} \frac{10-5}{15-0} = \frac{5}{15} = 0.33$$

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A company has monthly expenses represented by the function c(x) = 2x + 1,200 where x represents the number of items produced If the company spent \$2000 last month, how many items were produce? C(X) = 2X + 12002000 = 2X+1800 The average price of a movie ticket in the year 2009 was 6. \$5.39. The average price of a movie ticket in the year 2004 was \$6.21. Assuming the increase is linear, what would be the approximate price of a movie ticket in the year 2009?

Identifying the meaning of slope and y-intercept

7. The equation y = 461.19x + 3, 492 represents the value of a work of art from 1964 to 2005. What does the number 461.19 represent?

value of the work of art in 1964 Y-incpt.

8. value of the work of art in 2005

C. yearly decrease in value

D. yearly increase in value

Identifying the meaning of slope and y-intercept

8. Mr. Hanson recorded the typing speeds (in words per minute) of 25 students and their weeks of experience. The line of best fit for the data is y = 4.4x + 18.9, where x is the number of weeks of experience of a student and y is the student's typing speed. What is the meaning of the y-intercept for this set of data?

A. the average typing speed of the students

(0,18.9)

- B. the highest typing speed recorded
- C. the improvement in typing speed per week for the average student
- D. the typing speed of a student with no experience

Identifying the linear equation:

9. A computer is purchased for \$1,200 and depreciates at \$140 per year. Which linear equation represents the value, V, of the computer after t years?

A.
$$V = 1,200 - 140t$$

B. $V = 140t$
C. $V = 140t - 1,200$
D. $V = 140(1,200 - t)$

- m = -140 b = 1200
- 10. Martha has \$180. She needs a total of \$2,000 to start an account. She earns \$60 per day working, of which she saves \$50. Which equation can she use to determine the number of days, a, she needs towork to reach her goal of \$2,000?

A.
$$2,000 = 60d + 180$$

B. $2,000 = 60d - 180$
C. $2,000 = 50d + 180$
D. $2,000 = 50d - 180$

$$m = 50$$
 $b = 180$