

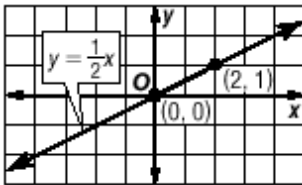
Name _____

Date _____ Pd. _____

Notes: Slope and Direct Variation

Direct Variation A _____ is described by an equation of the form $y = kx$, where $k \neq 0$. We say that y *varies directly as* x . In the equation $y = kx$, k is the _____

Example 1 Name the constant of variation for the equation. Then find the slope of the line that passes through the pair of points.



Example 2 Suppose y varies directly as x , and $y = 30$ when $x = 5$.

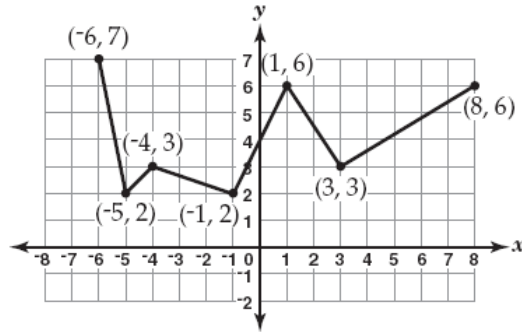
- Write a direct variation equation that relates x and y .
- Use the direct variation equation to find x when $y = 18$.

Name _____

Date _____ Pd. _____

Exit Card: Slope and Direct Variation

1. Look at the function that is graphed below.



What is the greatest rate of increase of this function?

F $\frac{3}{5}$

G $\frac{3}{2}$

H 2

J 5

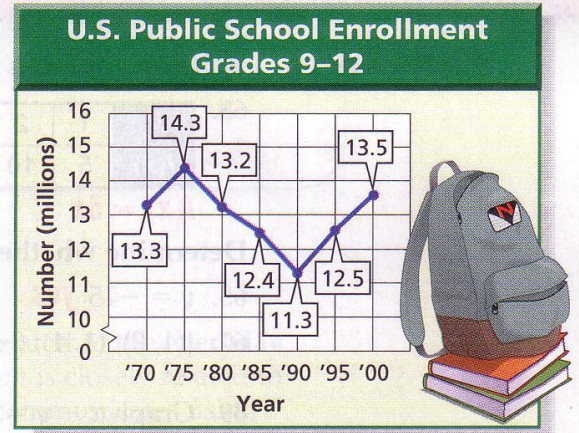
2. The number of gallons of water (g) you need to drink varies directly with the temperature (t). If you need to drink 8 glasses of water when the temperature is 26 degrees Celsius, how many glasses of water should you drink when the temperature is 39 degrees Celsius?

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Homework: Pages 261 – 262 (53 – 55, 57 – 61)

The graph shows public school enrollment.

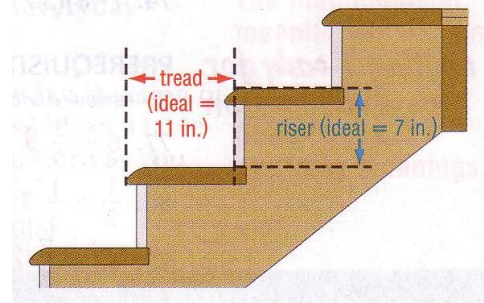


53. For which 5-year period was the rate of change the greatest?

What was the rate of change the least?

54. Find the rate of change from 1985 to 1990.
55. Explain the meaning of the part of the graph with a negative slope.

57. The slope of a stairway determines how easy it is to climb the stairs. Suppose the vertical distance between two floors is 8 feet 9 inches. Find the total run of the ideal stairway in feet and inches.



58. Why is slope important in architecture?

Include the following in your answer:

- An explanation of how to find the slope of a roof, and
- A comparison of the appearance of roofs with different slopes.

59. The slope of the line passing through $(5, -4)$ and $(5, -10)$ is

- a. positive b. negative c. zero d. undefined

60. The slope of the line passing through (a, b) and (c, d) is

- a. $\frac{d-c}{b-a}$ b. $\frac{b-d}{a-c}$ c. $\frac{d-b}{a-c}$ d. $\frac{c-c}{b-d}$

61. Choose four different pairs of points from those labeled on the graph. Find the slope of the line using the coordinates of each pair of points. Describe your findings.

