

Name _____

Date _____ Pd. _____

Notes: Direct Variation Continued

| | |
|------------------------------|--|
| Constant of Variation | In a direct variation problem, where _____, k is the _____. |
| Direct Variation | A _____ described by an equation of the form _____, where $k \neq 0$. |

Graphic Representations and the Graphing Calculator

The graphing calculator graphs _____. In order to use the calculator to graph lines, you will need have to solve equations for y .

The calculator uses the notation _____ rather than _____.

You need to think about the _____ of the window in order to view all the important aspects of the graph of a _____.

You can explore the _____ function and the _____ function.

Investigate what happens when you change the _____, _____ or _____ for the window.

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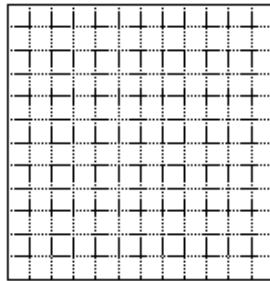
Exit Card: Direct Variation Continued**ECR**

On a camping trip, the campers used the same amount of water each day. On the second and fifth day, the cook recorded the total gallons used so far in the chart below

| | | |
|--------------------|----|----|
| Day | 2 | 5 |
| Total Gallons Used | 24 | 60 |

Complete the following:

- Make a graph of the total number of gallons (y) and the number of days they have camped (x).
- At what rate are the campers using water? Use appropriate units. Use mathematics to explain how you determined your answer. Use words, symbols, or both in your explanation.
- How much water will they use after 9 days? Use mathematics to explain how you determined your answer. Use words, symbols, or both in your explanation.

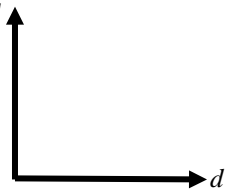


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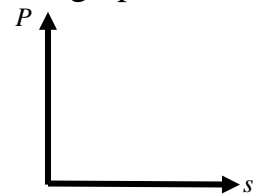
Date _____ Pd. _____

Homework: Pages 268 – 269 (43 – 46, 48 – 53, 57, 58)

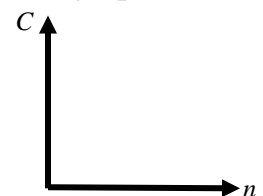
43. Write a direct variation equation that relates the variables, then graph: The circumference C of a circle is about 3.14 times the diameter d .



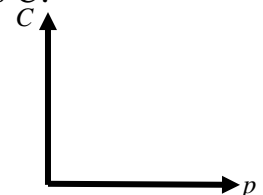
44. Write a direct variation equation that relates the variables, then graph: The perimeter P of a square is 4 times the length of a side s .



45. Write a direct variation equation that relates the variables, then graph: The total cost is C for n yards of ribbon priced at \$0.99 per yard.

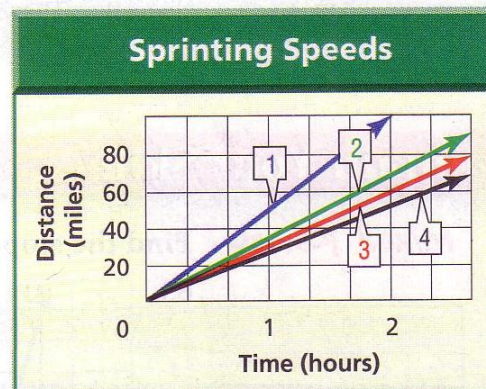


46. Write a direct variation equation that relates the variables, then graph: Kona coffee bean are \$14.49 per pound. The total cost of p pounds is C .



Which line in the graph represents the sprinting speeds of each animal?

48. elephant, 25 mph
 49. reindeer, 32 mph
 50. lion, 50 mph
 51. grizzly bear, 30 mph



The weight of an object on the moon varies directly with its weight on Earth. With all of his equipment, astronaut Neil Armstrong weighed 360 pounds on Earth, but weighed only 60 pounds on the moon.

52. Write an equation that relates weight on the moon m with weight on Earth e .

53. Suppose you weigh 138 pounds on Earth. What would you weigh on the moon?

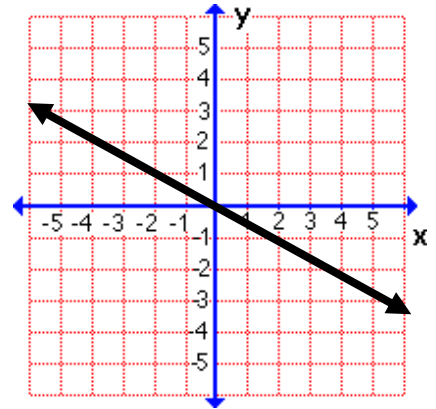
57. Which equation best describes the graph at the right?

A $y = 2x$

B $y = -2x$

C $y = \frac{1}{2}x$

D $y = -\frac{1}{2}x$



58. Which equation does *not* model a direct variation?

A $y = 4x$

B $y = 22x$

C $y = 3x + 1$

D $y = \frac{1}{2}x$