

Student: _____

Date: _____

Time: _____

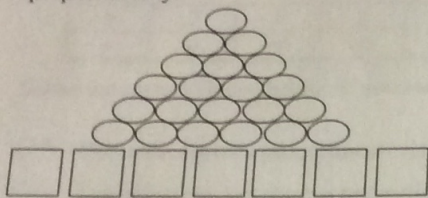
Instructor: Bethany Mampre

Course: digits - grade 7 (4)

Book: digits - grade 7

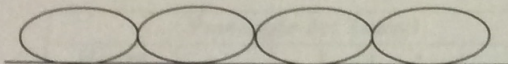
Assignment: 2-3 Homework G

1. The variable y is in a proportional relationship with x . The number of squares represents an x value. The number of ovals represents the corresponding y value. Identify the constant of proportionality.



The constant of proportionality is .

2. The weight of 4 eggs is shown. Identify the constant of proportionality of total weight to number of eggs.



The weight of 4 eggs is 172 g.

The constant of proportionality is grams per egg.

3. Suppose the relationship between x and y is proportional. When x is 6, y is 156. Identify the constant of proportionality of y to x .

The constant of proportionality is .

4. Since a middle school opened, the girls' basketball team has had the same record every season. The team has won a total of 182 games while losing only 13 games. Find the constant of proportionality of wins to losses.

The constant of proportionality is wins per loss.

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5. Does the table show a proportional relationship? If so, what is the constant of proportionality of y to x ?

x	2	3	4	5
y	40	60	80	100

Select the correct choice below. If necessary, fill in the answer box to complete your choice.

- A. The table shows a proportional relationship. The constant of proportionality is .
- B. The table does not show a proportional relationship.

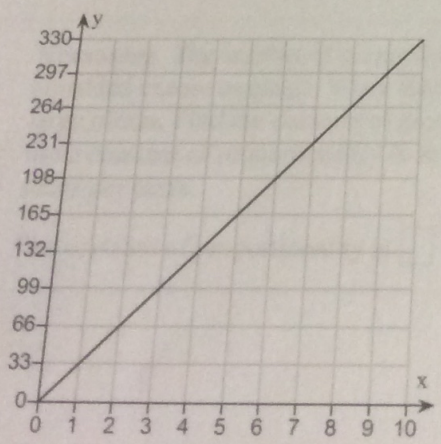
6. The distance a jet aircraft flies has a proportional relationship with its number of hours in flight. The table shows the number of miles flown for a number of hours in flight. Find the constant of proportionality. How long will the jet take to travel 5,280 miles?

Passenger Jet Travel				
Hours	2	3	4	5
Miles	880	1,320	1,760	2,200

The constant of proportionality is miles per hour.

The jet will take hours to travel 5,280 miles.

7. The variable y has a proportional relationship with x as suggested by the graph. Use the graph to find the constant of proportionality. The constant of proportionality is .



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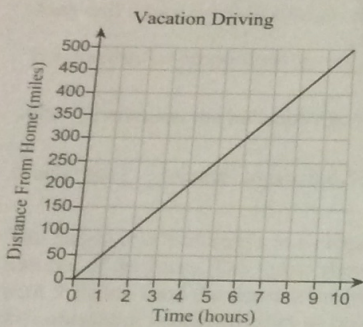
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8. The graph shows a proportional relationship between a family's distance from home and the time they spent driving. What is the constant of proportionality? What does the point (1,50) represent?



The constant of proportionality is miles per hour.

What does the point (1,50) represent?

- 50 miles in 50 hours
- 50 miles in 1 hour
- 1 mile in 50 hours

9. **Writing** Suppose the relationship between x and y is proportional. When x is 23, y is 264.5. Find the constant of proportionality of y to x . Use the constant of proportionality to find x when y is 471.5. Use pencil and paper. Explain how you can tell a relationship that is proportional from a relationship that is not proportional.

The constant of proportionality is .

(Type a whole number or a decimal.)

When y is 471.5, x is .

10. **Reasoning** The number of pizzas is in a proportional relationship to the weight of the shredded cheese toppings. When shredded, a 30-lb block of cheese is enough to make 112.5 large pizzas. Find the constant of proportionality. Use pencil and paper. Explain how you can use a constant of proportionality to find how much cheese is on one slice of pizza if there are 8 slices per pizza.

The constant of proportionality is pizzas per pound of cheese.

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11. **Helicopter Ride** A couple takes a helicopter ride over a city. The table shows the proportional relationship between altitude and time as the helicopter ascends. Find the constant of proportionality of altitude to time. What will the altitude of the helicopter be after 10 minutes? How long will it take to reach a height of 6,314 feet?

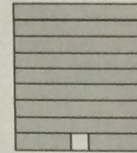
Helicopter Ascent	
Time(min)	Altitude(ft)
4	2,296
5	2,870
6	3,444
7	4,018

The constant of proportionality is feet per minute.

After 10 minutes, the helicopter will be at feet.

It will take minutes to reach 6,314 feet.

12. The height of a building is in a proportional relationship to the number of its floors. The figure shows the height of a building with 9 floors. Find the constant of proportionality. Then use the constant of proportionality to find the height of a building with 13 floors. Use pencil and paper. What does the constant of proportionality tell you?



The height of a building with 9 floors is 144 feet tall.

The constant of proportionality is feet per floor.

The height of a building with 13 floors is feet.