

End of Year Review #2 Math

Total questions: 44

Worksheet time: 2hrs 48mins

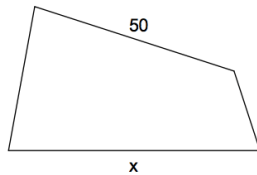
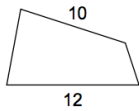
Instructor name: Gabrielle Heffernan

1. Which ratio below is proportional to the ratio $5/6$?

a) $6/5$ b) $50/75$ c) $25/30$ d) $12/10$

2.

17)



a) 5

b) 41.66

c) 60

3. A cake recipe calls for 1.5 cups of milk and 3 cups of flour. Seth made a mistake and used 5 cups of flour. How many cups of milk should he use to keep the proportions correct?

a) 2.25 cups milk

b) 1.75 cups milk

c) 2.5 cups milk

d) 2 cups flour

4. The distance that an automobile travels varies directly as the time it travels. If the car travels 280 miles in 7 hours, how far will it travel in 12 hours?

a) 480

b) 84

c) 25

d) 1960

5. In an animal shelter, the ratio of dogs to cats is 5 to 3. There are 25 dogs. Write and solve a proportion to find the number c of cats.

a) $c=16$
c) $c=18$

b) $c=21$
d) $c=15$
6. Madeline ran 21.7 miles in 7 hours. What is the unit rate?

a) .32 miles per hour
c) $\frac{21.7}{7}$

b) 21.7 miles per hour
d) 3.1 miles per hour
7. Hamburger meat sells for \$6 for every 3 pounds. If Alicia buys 10 pounds of hamburger meat, how much will she pay?

a) \$30
c) \$20

b) \$10
d) \$60
8. Find the Unit Rate.
405 rotations in 5 minutes

a) 18 rotations per minute
c) 81 rotations per minute

b) 73 rotations per minute
d) 810 rotations in 10 minutes
9. A 12-ounce bottle of shampoo lasts Enrique 16 weeks. How long would you expect an 18-ounce bottle of the same brand to last him?

a) 10.6-ounce bottle
c) 24 Weeks

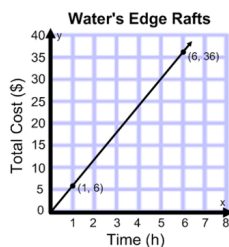
b) 24-ounce bottle
d) 10.6 Weeks
10. A 6-ounce package of fruit snacks contains 45 pieces. How many pieces would you expect in a 10-ounce package?

a) 75 Pieces
c) 27 pieces

b) 75-ounces
d) 27-ounces

11. At a local university, in a typical classroom, the ratio of females to males is 15 to 8. How many females are there at the entire university if there are 520 males?
- a) 1,050 b) 820
- c) 975 d) 825
12. 6. AMUSEMENT PARKS The waiting time to ride a roller coaster is 20 minutes when 150 people are in line. How long is the waiting time when 240 people are in line?
- a) 32 People b) 32 Min.
- c) 12.5 People d) 12.5 Min.

13.

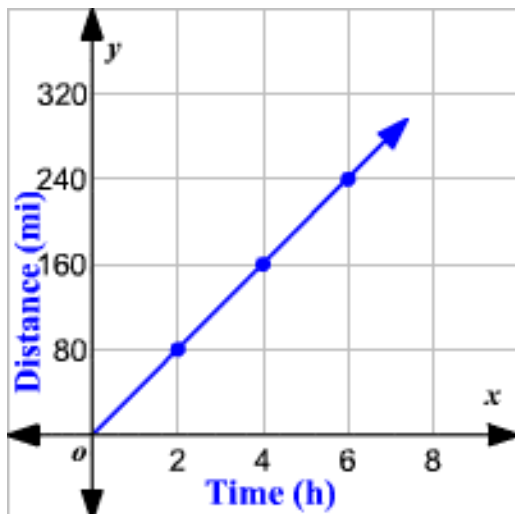


Ryan's Rafts	
Time (h)	Cost (\$)
1	15.00
2	17.25
3	19.50
4	21.75
5	24.00

What is the rate of change (slope) to rent a raft from Water's Edge Rafts?

- a) \$1 for 6 hours b) \$6 per hour
- c) \$1 for 5 hours d) \$5 per hour

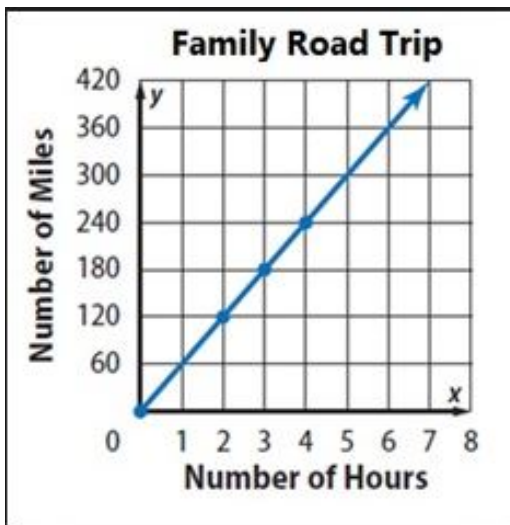
14.



What is the rate of change for the following graph?

- a) 80 b) 40
c) 160 d) 20

15.



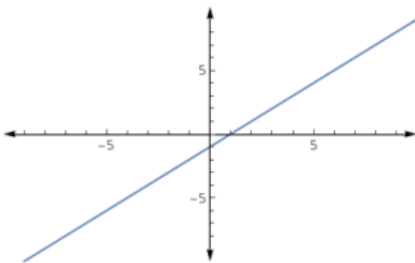
What is the unit rate in this proportional relationship?

- a) 120 miles/ 2 hours
- b) 60 miles/1 hour
- c) 1 mile/ 1 hour

16. The cost of 4 pounds of grapes is \$24.36. What is the constant of proportionality that relates cost in dollars, y , to the number of pounds of grapes, x ?

- a) 8.12
- b) 28.36
- c) 6.09
- d) 20.36

17.



Does this graph represent a proportional relationship?

- a) Yes, because it doesn't pass through the origin.
- b) No, because it intersects the x axis.
- c) No, because it doesn't pass through the origin.
- d) Yes, because it intersects the y axis.

18.

2.

x	2	4	6	8
y	10	20	30	40

Write an equation for this relationship.

a) $y=5x$

b) $y=1/2x$

c) $y=1/5x$

d) $y=2x$

19.

Time (hours)	Distance (miles)
2	90
3	135
5	225
6	270

What is the constant of proportionality (in miles per hour) based on the table?

a) 45

b) 135

c) 2

d) 90

20. In the equation $y = 14x$, what is the constant of proportionality?

a) x

b) 14

c) y

21.

Hours	Money
0	\$0
1	\$9
2	\$18
3	\$27
4	\$36

Which statement best describes the relationship of x and y in the table?

a) Proportional

b) Not Proportional

22.

Hours	Money
0	\$0
1	\$9
2	\$18
3	\$27
4	\$36

If you earned \$90 how many hours did you work?

a) 8

b) 10

c) 90

d) 9

23. Solve the equation:

$$-5x = 25$$

a) $x = 20$

b) $x = -5$

c) $x = 5$

d) $x = -20$

24. $19 + a = -50$

a) $a = -950$

b) $a = -69$

c) $a = -50/19$

d) $a = -31$

25. $x - 8 = -5$

a) -3

b) -13

c) 13

d) 3

26. Solve $3x - 7 = 32$

a) -12

b) 13

c) 12

d) -13

27. Solve for k:

$$3k + 5 = 23$$

a) $k = 6$

b) $k = 4$

c) $k = 5$

d) $k = 7$

28. Solve: $3(x-4) = -3$

a) -3

b) 3

c) -5

d) 5

29. UPS charges \$7 for the first pound, and \$0.20 for each additional pound. FedEx charges \$5 for the first pound and \$0.30 for each additional pound. Use your equation to find out how many pounds it will take for UPS and FedEx to cost the same.

a) 15 pounds

b) 4 pounds

c) 120 pounds

d) 20 pounds

30. Ziana has \$14 and plans to save \$5 each week until she has the \$64 she needs for a new jacket. How many weeks will it take Ziana to save money for a new jacket?
 - a) 10 weeks
 - b) 12 weeks
 - c) 13 weeks
 - d) 11 weeks
31. At one store a trophy costs \$12.50. Engraving costs \$0.40 per letter. At another store, the same trophy costs \$14.75 and engraving costs \$0.25 per letter. Use your equation to find out how many letters will be needed in order for the 2 companies to cost the same.
 - a) 10 letters
 - b) 20 letters
 - c) 5 letters
 - d) 15 letters
32. Which of these illustrates the associative property of multiplication?
 - a) $6(9 + 1) = (6 \times 9) + (6 \times 1)$
 - b) $5 + 0 = 0 + 5$
 - c) $4 \times (56) = (45) \times 6$
 - d) $4 \times (5 \times 6) = (4 \times 5) \times 6$
33. States that multiplying a number by 1 does not change the product
 - a) Identity Property of Zero
 - b) Identity Property of Addition
 - c) Identity Property of Multiplication
 - d) Multiplicative Property of Zero
34. States that a number and its opposite always add to zero.
 - a) Identity Number of Addition
 - b) Identity Property of Addition
 - c) Commutative Property of Addition
 - d) Additive Inverse Property
35. Which of these illustrates the Commutative Property of Multiplication?
 - a) $a \cdot b = b \cdot a$
 - b) $a(b + c) = ab + ac$
 - c) $ab \cdot 1 = ab$
 - d) $a(bc) = (ab)c$
36. $ab \cdot 1 = ab$
 - a) Associative Property of Multiplication
 - b) Commutative Property of Multiplication
 - c) Multiplicative Inverse
 - d) Identity Property of Multiplication

37. $4 + 3 + (2 + 5) = 4 + (3 + 2) + 5$

a) Associative Multiplication

b) Commutative Multiplication

c) Commutative Addition

d) Associative Addition

38. What is the additive inverse of 9?

a) 9

b) -9

c) 1.9

d) 0

39. What is the additive inverse of +5?

a) 1

b) -5

c) 1/5

d) 0

40. Name the property.

$$2x + 22 = 2(x + 11)$$

a) Distributive Property

b) Associative Property

c) Identity Property

d) Commutative Property

41. $5 + (-5) = 0$

a) Multiplicative Property of Zero

b) Additive Inverse Property

c) Associative Property of Addition

d) Distributive Property

42.

$$\frac{2}{3} \cdot \frac{3}{2} = 1$$

- a) Multipliative Identity Property
- b) Additive Inverse Property
- c) Multiplicative Inverse Property
- d) Commutative Property of Multiplication

43. Use the distributive property to simplify the expression:

$$6(3 - y)$$

- a) $18 - y$
- b) $9 - y$
- c) $18 - 6y$
- d) $18 + 6y$

44. This is an example of which property?

$$\frac{1}{4} \cdot 4 = 1$$

- a) Distributive Property
- b) Multiplicative Inverse Prop.
- c) Commutative Prop. of (x)
- d) Multiplicative Identity Prop.