

7th Grade Summer Review and Practice

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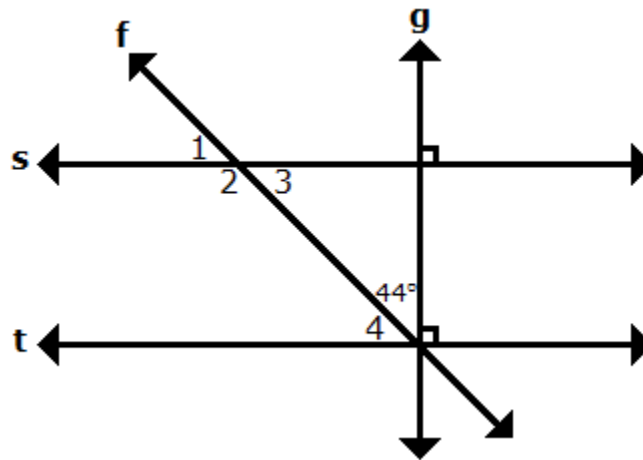
Name:

Directions: Show your work and complete each problem.

1. A recipe for making popcorn requires 2 tablespoons of butter for every $\frac{1}{3}$ cup of popcorn kernels. What is the rate of tablespoons of butter per cup of popcorn kernels for this recipe?

- A. 6
 - B. 5
 - C. 2
 - D. 3
-

2. Parallel lines s and t are intersected by transversal lines f and g , as shown in the figure below. What is the measure of angle 2?



- A. 44°
 - B. 134°
 - C. 46°
 - D. 136°
-



3. Which equation could be used to find the total amount earned, T , for working h hours at d dollars per hour?

- A. $T = \frac{h}{d}$
 - B. $T = d + h$
 - C. $T = \frac{d}{h}$
 - D. $T = dh$
-

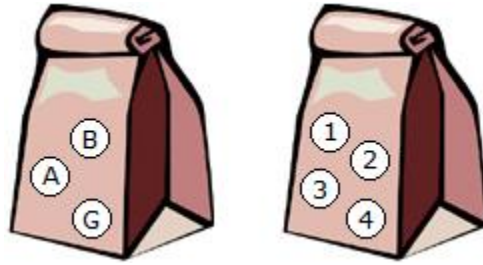
4. Which of these is an example of a random sample?

- A. Mrs. Baker selects the 10 students whose names are drawn from a bag to fill out a survey.
 - B. Mrs. Baker selects the 10 students who arrived to class first on Monday to fill out a survey.
 - C. Mrs. Baker selects the 10 students with the highest grade point averages to fill out a survey.
 - D. Mrs. Baker selects the 10 students who raised their hands to volunteer to fill out a survey.
-

5. Jayden scored more than $\frac{2}{3}$ the number of points Kenneth scored. If Jayden scored 18 points, which inequality solution represents k , the number of points Kenneth could have scored?

- A. 
 - B. 
 - C. 
 - D. 
-

6. A bag contains chips lettered B, A, and G. A second bag contains four chips numbered 1, 2, 3, and 4.



The list in the box below shows all of the possible combinations of letters and numbers which can result from selecting one chip from each bag. If one chip is randomly selected from each bag, what is the probability that a chip with a B on it and a chip with a 2 on it will be selected?

B 1	A 1	G 1
B 2	A 2	G 2
B 3	A 3	G 3
B 4	A 4	G 4

- A. $\frac{1}{4}$
- B. $\frac{1}{6}$
- C. $\frac{1}{12}$
- D. $\frac{1}{3}$

-
7. Which two ordered pairs represent a proportional relationship?

- A. (2, 1) and (2, 2)
- B. (3, 2) and (2, 2)
- C. (1, 1) and (2, 3)
- D. (1, 1) and (2, 2)
-

8. Jean drove 68 miles per hour for a total of 476 miles on a trip. She used the equation below to calculate the time, t , it would take her to complete the trip.

$$476 = 68t$$

What is the unit rate in the equation?

- A. 7
 - B. 68
 - C. 476
 - D. t
-

9. The base of a shipping drum is in the shape of a circle with a diameter of 24 inches. Which of the following is closest to the circumference of the base of the shipping drum? (Use 3.14 for π .)

$$\text{Circumference} = 2\pi r$$

- A. 1,808.64 inches
 - B. 150.72 inches
 - C. 75.36 inches
 - D. 37.68 inches
-

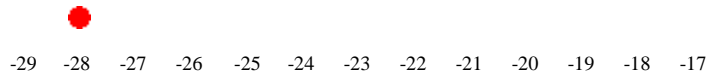
10. Martin bought a video game and a game remote for \$82.98. The video game cost \$44.99. The equation below describes the price of the game remote (r).

$$44.99 + r = 82.98$$

Which is the first step to find the value of r ?

- A. multiply both sides by 44.99
 - B. add 44.99 to both sides
 - C. divide both sides by 44.99
 - D. subtract 44.99 from both sides
-

11.



Use the number line above to solve the equation below.

$$-28 + 2 =$$

- A. 26
 - B. -26
 - C. 30
 - D. -30
-

12. Simplify the expression.

$$(5x + 8y) - (10x - 2y + 6)$$

- A. $-5x + 6y + 6$
 - B. $-5x + 10y - 6$
 - C. $-5x + 10y + 6$
 - D. $-5x + 6y - 6$
-

13. Convert the following fraction to a decimal.

$$\frac{1}{3}$$

- A. $0.0\bar{3}$
 - B. $0.\bar{3}$
 - C. 0.303
 - D. 3.9
-

14. Janie designed a miniature couch for a dollhouse based on her own couch. Janie's couch is $7\frac{1}{2}$ feet long. The scale of the dollhouse is 1 inch : 2 feet. What is the length of the miniature couch for the dollhouse?

- A.** $3\frac{3}{4}$ inches
 - B.** $3\frac{1}{5}$ inches
 - C.** $3\frac{1}{4}$ inches
 - D.** $2\frac{1}{2}$ inches
-

15. The original price of a ski jacket was \$250. It was on sale at a 25% discount. Arianna had a coupon for an additional $\frac{1}{10}$ off the sale price.

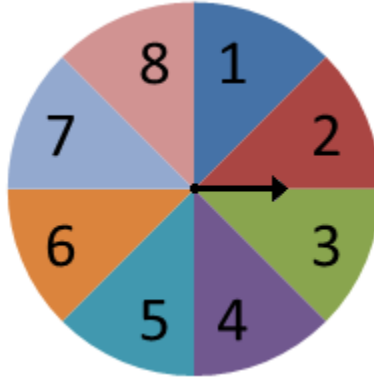
What price did Arianna pay for the ski jacket?

- A.** \$177.50
 - B.** \$187.50
 - C.** \$162.50
 - D.** \$168.75
-

16. Ayesha bought a 24-pack of lip gloss for \$17.76. What is the unit cost per tube of lip gloss?

- A.** \$1.48
 - B.** \$0.74
 - C.** \$8.88
 - D.** \$2.96
-

17. The arrow on the spinner below is spun once.



What is the probability the arrow on the spinner does not stop on a number divisible by 3?

- A. $\frac{1}{8}$
 - B. $\frac{3}{4}$
 - C. $\frac{1}{4}$
 - D. $\frac{7}{8}$
-

18.

Amy spent \$84 at the store.

- She spent $\frac{1}{2}$ of her money on food.
- She spent $\frac{1}{4}$ of her money on school supplies.
- She spent $\frac{1}{6}$ of her money on soda.

How much did she spend on school supplies?

- A. \$21
 - B. \$42
 - C. \$28
 - D. \$14
-

19. So far this season, Shawn has averaged 7 out of 11 free throws per game. Based on his previous performance, how many free throws can Shawn expect to make if he takes 22 free throws in his next game?

- A. 4
 - B. 7
 - C. 21
 - D. 14
-

20. The volume of a rectangular prism is 560 cubic centimeters. The length, L , is 8 centimeters and the width, W , is 14 centimeters. What is the height, H , in centimeters, of the rectangular prism?





$$\text{Volume of a rectangular prism} = lwh$$

- A. 70 cm
 - B. 538 cm
 - C. 40 cm
 - D. 5 cm
-

21. Taryn is hosting a party at a restaurant. The restaurant is charging her \$160 to rent the space and \$20 per guest. If Taryn wants to spend less than \$660, which inequality could be used to solve for x , the number of guests Taryn can invite?

- A. $\$20x < \160
 - B. $\$20x < \660
 - C. $\$20x - \$160 < \$660$
 - D. $\$20x + \$160 < \$660$
-

22. A spinner with four different colors was spun 20 times. The results are shown in the table.

blue	
green	
red	
yellow	

Based on the results, how do the chances of landing on red compare to the chances of landing on yellow if the spinner is spun again?

- A. It is impossible to land on red or yellow.
 - B. It is less likely to land on red than yellow.
 - C. It is equally likely to land on red or yellow.
 - D. It is more likely to land on red than yellow.
-

23. Sinead bought 2 shirts for \$15.80 each and a pair of shoes for \$42.73. If she paid for the items with a \$100 bill, how much change did she receive?

- A. \$25.67
 - B. \$9.87
 - C. \$41.47
 - D. \$74.33
-

24. Simplify the following expression.

$$3\frac{1}{2} - \frac{2}{5}$$

- A. $3\frac{1}{10}$
- B. $3\frac{9}{10}$
- C. 3
- D. $2\frac{2}{5}$

25. Emma spent \$29.22 on 3 dozen bagels and a gallon of iced tea. The price of the gallon of iced tea was \$5.25. The following equation can be used to find d , the price of each dozen of bagels.

$$3d + 5.25 = 29.22$$

What was the price of each dozen of bagels?

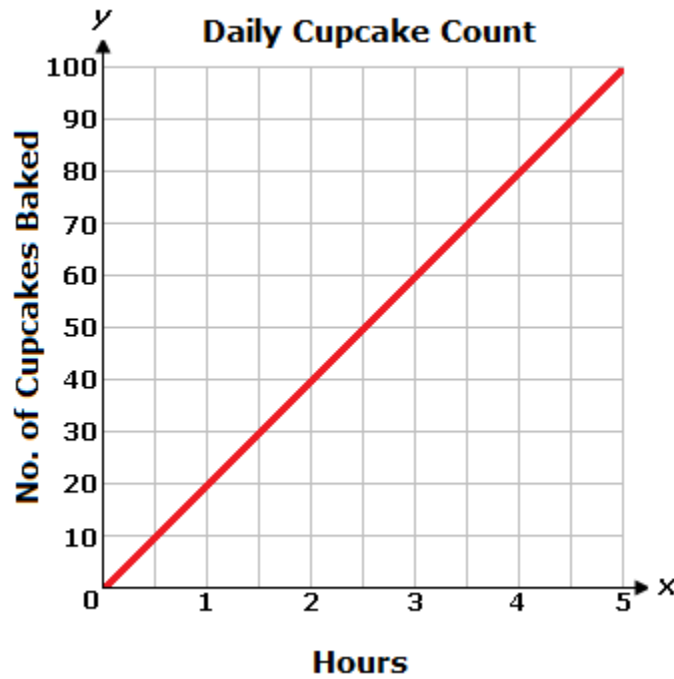
- A. \$4.49
 - B. \$9.74
 - C. \$6.99
 - D. \$7.99
-

26. Solve.

$$12\frac{3}{8} \div 5\frac{1}{2}$$

- A. $68\frac{1}{16}$
 - B. $2\frac{1}{4}$
 - C. $\frac{4}{9}$
 - D. $17\frac{7}{8}$
-

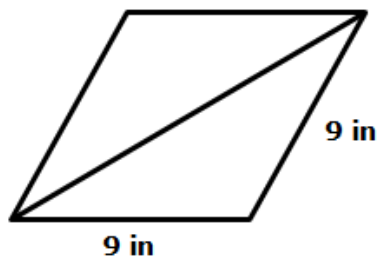
27. A bakery makes the same number of cupcakes each hour, as shown on the graph below.



What does the point (2, 40) represent on the graph?

- A. 40 cupcakes made in 2 days
 - B. 2 cupcakes made in 40 hours
 - C. 40 cupcakes made in 2 hours
 - D. 2 cupcakes made in 40 days
-

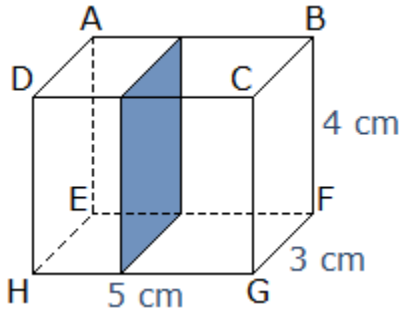
28. The figure shows a rhombus divided into two congruent triangles.



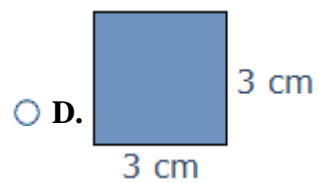
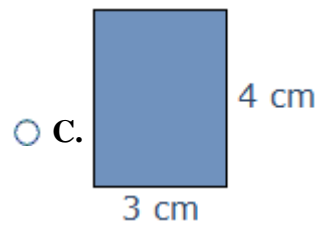
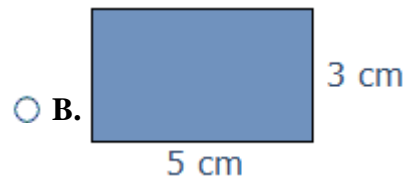
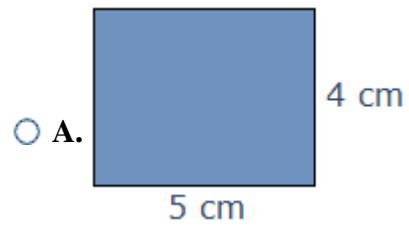
Which term best describes these triangles?

- A. scalene
- B. acute
- C. equilateral
- D. isosceles

29. The rectangular prism below is intersected by a plane that is parallel to face BCGF, as shown.



Which of the following represents this cross-section?



30. A farmer weighed 20 dairy goats in pounds. Of the goats, 10 were males and 10 were females.

	Males	Females
First Quartile	29	21
Second Quartile (Median)	57	48
Third Quartile	78	72

Based on these samples, what generalization can be made?

- A.** All of the male goats weigh more than all of the female goats.
- B.** The interquartile range for the female goats is greater than the interquartile range for the male goats.
- C.** All of the female goats weigh more than all of the male goats.
- D.** The interquartile range for the male goats is greater than the interquartile range for the female goats.