

7th Grade Summer Math Assignment

NAME: _____

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1. Ava wants to find the Greatest Common Factor of 32 and 12. She started by finding the prime factorization of each number but then she forgot the next step. Below is Ava's work:

$$32 = 2 \times 2 \times 2 \times 2 \times 2$$

$$12 = 2 \times 2 \times 3$$

What should Ava do next to find the GCF of 32 and 12?

- A. Multiply 2×2
- B. Multiply 2×3
- C. Multiply $2 \times 2 \times 2 \times 2$
- D. Multiply $2 \times 2 \times 2 \times 2 \times 2 \times 3$

2. Dale wants to find the Least Common Multiple of 6 and 10. Dale found the prime factorization of each number.

$$6 = 2 \times 3$$

$$10 = 2 \times 5$$

Based on Dale's work, what is the LCM of 6 and 10?

- A. 2
- B. 4
- C. 30
- D. 60

3. Which expression has a value of 3?

- a. $3(4^2 - 3^2)$
- b. $24 - 23 \cdot 3$
- c. $3^3 - 3^2$
- d. $(6^2 - 3)(9^2 - 70)$

4. Which phrase is a description of $2m + 7$?

- a. 7 more than 2 times m
- b. 2 more than 7 times m
- c. 2 times the sum of 7 and m
- d. 7 times the sum of 2 and m

5. You're having a cookout! At the store, hot dogs come in packages of 10. Buns come in packages of 12. What is the smallest number of packages of hot dogs you need to buy if you want to buy the same number of hot dogs as buns?

Show Your Work

6. Alexis is buying new school clothes. The items she wants to buy add up to \$132.50 before sales tax. Sales tax is 8%. What is the amount of sales tax for the items?

Show your work:

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7. You and 3 friends are out to lunch and the bill comes to \$47.49. If you split the bill evenly, how much will each person pay? Round to the nearest cent.

9. Is $4(2x + 6) = 6x + 10$? Answer this with yes or no. Justify your answer by showing your work.

Show your work

8. Simplify the expression.

$$5(4 + 7x)$$

Show your work

10. Evaluate the expression $2x - 3x + 4$, when $x = 3$.

Show your work.

Answer

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11. Carlos gym offers the following plan:

Regular deal
Pay \$50 a month
and \$2 each
time you work
out

a. Write an equation to represent this monthly membership option, where "w" represents the number of workouts and "c" represents the cost.

b. Carlos worked out 12 times last month. Evaluate the equation for c=12.

12. At a potluck dinner, 5 apple pies, 6 cherry pies, and 10 cream pies were served. Write each ratio three ways.
A. cherry pies to apple pies

B. cream pies to total pies

C. apple pies to cream pies

D. total pies to cherry pies

13. Which of the following ratios is equivalent to

$$\frac{12}{18}$$

A $\frac{6}{3}$

B $\frac{2}{3}$

C $\frac{4}{9}$

D $\frac{6}{8}$

14. A quilt block has 10 green squares, 50 blue squares, and 40 yellow squares. What is the ratio of yellow to blue squares?

F 40:50

G 50:40

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H 10:40 **J** 40:100

15. Which shows 121% as a decimal?

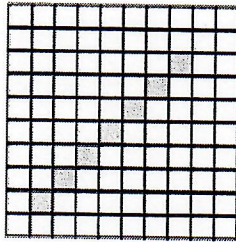
A 0.121

B 12.1

C 1.21

D 121

16. Which does not represent the shaded part?



F 7%

H $\frac{7}{100}$

G 0.07

J 0.7

Use the advertisements to answer questions 16 and 17.

Painter's Palette	
acrylic paint	2 for \$7.50
brushes	2 for \$5.25

The Hobby Shop	
acrylic paint	3 for \$9.79
brushes	4 for \$10.99

Art World	
acrylic paint	6 for \$18.99
brushes	3 for \$9.50

16. Which store has the best buy on acrylic paint? What is the unit price there?

A. The Hobby Shop; \$3.27

B Art World; \$3.75

C Art World; \$3.17

D The Hobby Shop; \$3.17

17. Which store has the best buy on brushes? What is the unit price there?

A Painter's Palette; \$2.63

B The Hobby Shop; \$2.75

C Painter's Palette; \$2.25

D Painter's Palette; \$3.17

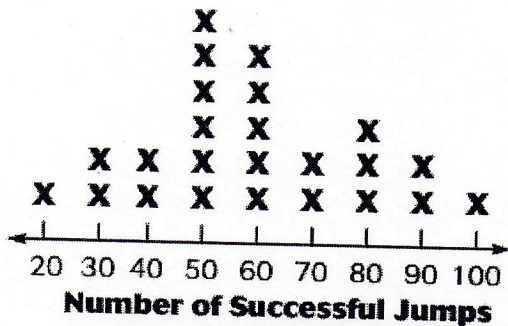
Use the line plot below to answer Exercises 18-21.

The students in Ms. May's classroom had a contest to see who could jump rope longest

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without tripping. They made a line plot to record their data.



18. What was the most common number of successful jumps?

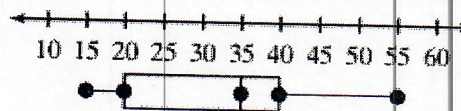
19. How many jumps does the student with the best record have?

20. Does the data for jumping form any clusters?

21. How many students were able to jump 70 or more times?

Use the box-and-whisker plot to answer questions 22-25.

Weekly Mileage Totals, 24 Runners



22. What is the highest weekly total?

The lowest?

23. What is the median weekly total?

24. What percent of runners run less than 40 miles a week?

25. How many runners run less than 20 miles a week?
