

Review of Quarter 1 and 2

Name: _____

Exponents

- Write the expression in exponential form. $5 \times 5 \times 5 \times 5 \times 5 \times 5$ _____
- Find the value of
 - -2^3 _____
 - 8^3 _____
 - 7^4 _____
 - -3^4 _____
 - 86^0 _____
 - $-9^2 + 3^0 + 2^1 =$ _____
- Students at a junior high school play a game called "pass it along." In this game, one student picks a phrase and tells it to 3 other students. Each of these students then tells 3 more students. How many students will be told the phrase during round 4? _____

Order of Operations

- $(-28 \div 4)^2 \cdot 5 - 6 + 4^2$ _____
- $44 + 6 \div 2^1 \cdot -3 - 2^3$ _____
- $147 \div (-7 + 2 \times 14^1) \cdot -2^3 - 9$ _____

Algebra: Write algebraic expressions for the following:

- 7 less than a number _____
 - 7 divided into w _____
 - 15 more than twice a number _____
 - 32 more than w _____
 - the quotient of 320 and 15 _____
 - the product of 8 and z _____
 - 9 less than b _____
- Evaluate when $x=3$
 - $5x^2 + 7$ _____
 - $-2x - 4^0$ _____
- Lera's softball season has three times as many games as her soccer season. If g represents the number of games in Lera's soccer season, write an expression for the number of games in her softball season. _____
- The number of customers at a small bakery on Friday was 5 fewer than the number of customers on Thursday. If n represents the number customer on Thursday, write an expression for the number of customers on Friday. _____

11. Simplify:

- $2x + 5(2x + 5)$ _____
- $4w + 3(7 + 8w) + 8$ _____
- $4 + 6x^2 + 3x^2 + 8$ _____
- $t + 4(t + 8) + 7(3t + 4)$ _____
- $-3(x^2 - 4x) + -5(3x + 7) - 14x^2$ _____

12. Solve:

- $-109 = x + 27$ _____
- $x + 415 = -899$ _____
- $x - 415 = -399$ _____
- $x - 17 = 35$ _____

13. Solve:

- $\frac{w}{-8} = 12$ _____
- $\frac{x}{31} = -9$ _____
- $-3x = 51$ _____
- $24g = 168$ _____

14. Solve the multi-step equation:

- $4.5 + \frac{x}{6} = 6$ _____
- $-\frac{2}{3}x - 8 = 4$ _____
- $\frac{x+8}{-4} = 20$ _____
- $15x = 3(x+8)$ _____
- $-10 + 7(x+3) = 4(2x-1) + 5$ _____

Integers

- Write the opposite of each number. 6 _____ -144 _____ -12 _____ 8 _____
- Find the absolute value. -7 _____ $|19|$ _____ -8 _____ $|55|$ _____
- Write an integer to describe the situation.
Earned \$15 _____ 12 degrees below zero _____ spent \$20 _____ gained 11 pounds _____
- $-14 + 22$ _____ $-12 - 14$ _____ $-22 + -34$ _____ $22 - -4$ _____ $987 + -56$ _____
- $25x - 6$ _____ $-45x - 13$ _____ $-3x - 18$ _____ $-99 + 11$ _____ $-56 + -8$ _____ $123 + 3$ _____

Equivalent Fractions

- Simplify: $\frac{5}{25}$ _____ $\frac{18}{48}$ _____ $\frac{12}{36}$ _____
- Fill in the missing number: $\frac{3}{8} = \frac{?}{24}$ _____ $\frac{2}{9} = \frac{?}{45}$ _____
- Change to a mixed number or improper fraction. $\frac{27}{6}$ _____ $15\frac{6}{7}$ _____ $\frac{84}{5}$ _____ $8\frac{2}{9}$ _____

Compare Fractions

$$23. \frac{3}{8} \frac{5}{6} \quad - \frac{2}{3} \frac{5}{10} \quad \frac{7}{9} \frac{28}{36} \quad - \frac{3}{5} \frac{18}{30} \quad \frac{5}{7} \frac{3}{4}$$

Multiply and Divide Fractions:

24. Solve and simplify:

a. $3 \times \frac{2}{7}$ _____

b. $-\frac{4}{9} - \frac{5}{8}$ _____

c. $-3\frac{1}{2} \times 2\frac{1}{6}$ _____

d. $3\frac{2}{3} \times 4\frac{3}{5}$ _____

25. John ate brownies on Wednesday. He had $\frac{3}{4}$ of a pan leftover when he went to eat more on Thursday. On Thursday he ate $\frac{1}{3}$ of the leftovers. How much did he eat? _____ (on Thursday)26. Ms. Jones has 32 kids in her class and $\frac{2}{8}$ of them are boys. How many are boys? _____

27. $\frac{7}{8} \div 5$ _____ $-2\frac{7}{10} \div -4\frac{1}{4}$ _____

28. A group of 6 friends share $\frac{7}{8}$ box of popcorn equally. How much does each person get? _____29. It takes $\frac{1}{6}$ yard of ribbon to make a bow. How many bows can be made from $2\frac{2}{3}$ yards of ribbon? _____**Add and Subtract Fractions:**

Solve and Simplify

30. a. $\frac{1}{9} + \frac{5}{9}$ _____

b. $-\frac{5}{6} + \frac{1}{4}$ _____

c. $-2\frac{2}{9} + 3\frac{1}{6}$ _____

d. $\frac{4}{7} - \frac{1}{3}$ _____

e. $5\frac{2}{6} - 2\frac{5}{8}$ _____

f. $5\frac{3}{8} - 1\frac{11}{12}$ _____

g. $7\frac{1}{6} - 3\frac{3}{4}$ _____

31. Dwight calculated that he spends $\frac{2}{7}$ of his income on rent, and $\frac{1}{5}$ of his monthly income on food. How much more of his income does he spend on rent? _____32. Martin has a board $10\frac{3}{4}$ -feet long. He is going to cut off a section that is $2\frac{1}{4}$ feet long. How much of the board will be left? _____33. Sam grew 3 pumpkins. The pumpkins weighed $24\frac{1}{8}$ pounds, $18\frac{2}{4}$ pounds and $32\frac{5}{16}$ pounds. Find the combined weight. _____34. Sam had $28\frac{1}{4}$ cups of milk. He spilled $4\frac{2}{18}$ cups on the floor. How much does he have left? _____**Problem Solving:** Set each problem up as an equation and solve. Show all work.

35. Translate and solve.

Half a number minus five equals fifteen

36. Translate and solve.

Eight less than the quotient of a number and four equals negative five.

37. Mark needs $\frac{3}{4}$ cup of milk for a recipe. He has $\frac{2}{5}$ cup. Does he have enough milk? Explain...

38. Trish spent a fourth of her money on a new book. She paid a friend \$3.50 that she borrowed. Later she spent \$4.75 of a pair of earrings. When she arrived home, she had \$18. How much money did she have to start with?

39. From the top of a mountain to the floor of the valley below is 4,392 feet. If the valley is 93 feet below sea level, what is the height of the mountain?

40. Carol is sixty-six inches tall. This is twenty inches less than two times Mindy's height. How tall is Mindy?

41. One of two numbers is five more than the other. The sum of the numbers is 17. Find the numbers.

42. 320 tickets were sold for the school play. There were three times as many student tickets sold as adult tickets. Find the number of adult tickets sold.

43. The length of a rectangle is 4 cm less than three times the width. The perimeter of 64cm. Find the length and width.

44. The sum of 3 consecutive odd integers is 99. Find the 3 integers.

45. The sum of 3 consecutive even integers is 132. Find the 3 integers.

46. An orange has 20 fewer calories than a banana. If 7 bananas have the same number of calories as 9 oranges, how many calories are in a banana?