

Name _____
Homework # _____

Date _____

Review Worksheet #3

1. Algebraic Fractions

a. $\frac{10}{3x} \cdot \frac{2x}{5}$

b. $\frac{6k}{7m} \cdot \frac{14m}{3}$

c. $\frac{ac}{5} \cdot \frac{d}{c}$

d. $\frac{3}{n} \cdot \frac{n}{9}$

2. Find the GCF of each pair of monomials.

a. $12a^2b, 9ac$

b. $75n^2c^3, 25n^4c$

3. Simplify Algebraic Fractions

a. $\frac{24xy}{8x^2y}$

b. $\frac{-12ab^2}{4a}$

4. Carla babysat for $2\frac{1}{4}$ hours and earned \$11.25. What is her unit rate?

5. Find each product or quotient. Express using exponents.

a. $9^3 \cdot 9^2$

b. $\frac{10^5}{10^3}$

c. $\frac{(-x)^7}{(-x)}$

d. $10x^3y \cdot -2xy^2$

e. $t^{-2} \cdot t^{-3}$

f. $d^4 \cdot d^{-6}$

6. Name the property illustrated in each statement.

a. $5 + w + 8 = 5 + 8 + w$

b. $(5 \cdot w) \cdot 8 = 5 \cdot (w \cdot 8)$

c. $5w \cdot 1 = 5w$

d. $\frac{7}{a} \cdot \frac{a}{7} = 1$

e. $5(w + 8) = 5w + 40$

7. Simplify by combining like terms.

a. $7w + 3w + 2$

b. $x - 4(x + 3)$

c. $-7x + 3x + 2$

d. $2(t - 3) + 10$

e. $3(3x + 1) - 7x$

8. Tiffany's Gift Shop has fixed monthly expenses, E, of \$1850. If the owner wants to make a profit, P, of \$4000 next month, how many dollars in sales, s, does the shop need to earn? Use the formula $P = S - E$.

9. Perform the indicated operation.

a. $(-8)(-11b)(-c)$

b. $(-12m)(4n)$

c. $\frac{-24}{6}$

d. $-7 + 4$

e. $15 - (-7)$

f. $-4 - 3$

10. Frank needs an average score of 92 on five quizzes to earn an A. The mean of his first four scores was a 91. What is the lowest score that he can receive on the 5th quiz to earn an A?

11. Write and solve each equation.

a. Ten more than the quotient of a number and -2 is three.

b. If 17 is decreased by twice a number the result is 5 .

c. Four times a number plus five more than three times the number is 47 .

d. Four less than three times a number is 20 .

12. A map uses a scale of $1 \text{ cm} : 100 \text{ mi}$. Two cities are 3.2 cm apart on the map. What is the actual distance between the two cities?

13. Maria leaves home at $8:45 \text{ A.M.}$ and arrives at her friend's house at $11:30 \text{ A.M.}$ She drives at an average speed of $45 \text{ miles per hour}$ and makes one 15 minute stop during the trip. How far does Maria live from her friend?

14. Today's high temperature was 5 degrees Celsius. Convert this temperature to degrees Fahrenheit.

15. For a child, the regular admission price to a zoo is $\$13$. With a special pass, the admission price is discounted 20% . What is the admission price when the pass is used?

16. Your bill for a meal at a diner is \$11. The sales tax is 6%, and you plan to give a 15% tip. What is the total cost?

18. Simplify each expression.
a. $3 + 2[5 - (4 - 1)]$

b. $3^4 - 7 \div (4 \cdot 5)$

17. In a survey of 380 people, 25% said that they enjoy reading before going to sleep. How many of the people surveyed enjoy reading before going to sleep?

19. Inset two sets of parentheses in the expression below so that it is equal to -5. Show work!!!

$$\frac{4 - 8 \cdot 6 + 3^2}{5 - 2 - 4}$$