

Your Name: _____

Instructor's Name: _____

Signature: _____

Circle the **time** your class meets:

OSU email: _____@osu.edu

7:30a.m. 8:30 9:30 10:30 11:30 12:30 1:30 2:30 3:30 4:30 7:30p.m.

Directions: You have 90 minutes to complete this exam. There are 25 questions. Each question is worth 4 points. (There is no partial credit on multiple choice questions or questions 8, 15, 18, 19). Partial credit is rare, but possible; so please show your work. Write your answers clearly, and use the space provided for the answer!

For problems 1 - 5, write the **letter** of the correct answer in the space provided. Only one answer is correct.**Solve.**1) Jeffrey has two packages. One weighs $1\frac{2}{5}$ ounces, and the other weighs $\frac{3}{7}$ ounces. What is the total 1) _____

weight of the two packages?

A) $1\frac{29}{35}$ ounces

B) $\frac{5}{6}$ ounces

C) $2\frac{5}{6}$ ounces

D) $\frac{3}{5}$ ounces

Write the fraction in lowest terms.2) $\frac{10}{18}$ 2) _____

A) $\frac{5}{9}$

B) $\frac{5}{2}$

C) $\frac{2}{9}$

D) $\frac{10}{18}$

Write the phrase as an algebraic expression. Let x represent the unknown number.

3) Five times a number increased by 13 3) _____

A) $5x + 13$

B) $5x - 13$

C) $5x \cdot 13$

D) $5 + 13x$

Subtract.4) $-11.2 - (-10.7)$ 4) _____

A) 21.9

B) -21.9

C) 0.5

D) -0.5

Tell which set or sets the number belongs to: natural numbers, whole numbers, integers, rational numbers, irrational numbers, and real numbers.

5) -78

A) real

C) irrational, real

B) integer, rational, real

D) whole, real

5) _____

Simplify the expression. (Remember the order of operations.)

6) $\frac{34(8 - 5) - 6}{3^2 - 3}$

6) _____

Solve the equation.

7) $\frac{1}{3}a - \frac{1}{3} = -5$

7) _____

Find the multiplicative inverse or reciprocal of the number.

8) $5\frac{2}{9}$

8) _____

Use the distributive property to write the expression without parentheses. Then simplify, if necessary.

9) $\frac{1}{5}(15x - 10)$

9) _____

Write the following as an algebraic expression. Simplify if possible.

10) Subtract $9x + 6$ from $2x - 13$

10) _____

Solve the formula for the specified variable.

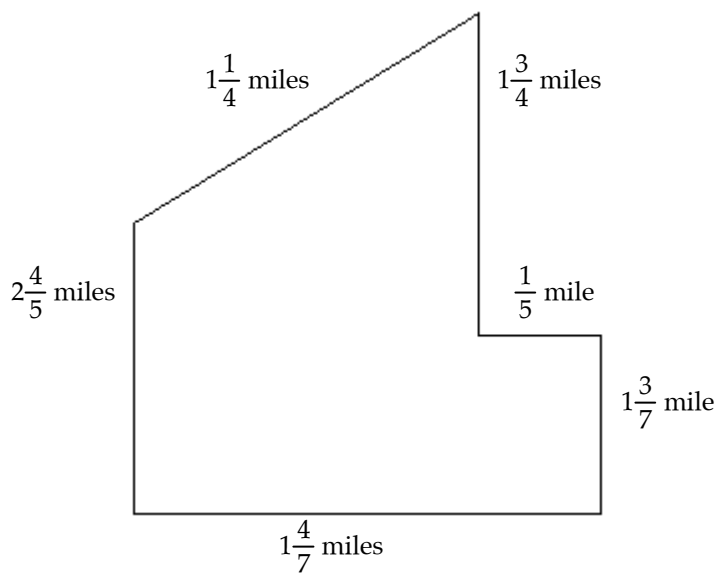
11) $Q = a + 2b + 3c$ for b

11) _____

The perimeter of a plane figure is the total distance around the figure. Find the perimeter of the figure.

12)

12) _____



Simplify the expression. (Remember the order of operations.)

13) $9 - (-9) + 15 + (-8)$

13) _____

Decide whether the given number is a solution of the given equation.

14) Is 8 a solution of $-4x - 6 = x + 4$?

14) _____

Evaluate.

15) -10^2

15) _____

Solve the problem by combining like terms.

16) To convert from meters to centimeters, we multiply by 100. For example, the number of centimeters in 3 meters is $100 \cdot 3 = 300$. If one piece of string has a length of $x - 3$ meters, and another piece of string has a length of $5x + 2$ centimeters, express their total length in centimeters as an algebraic expression.

16) _____

Write the following phrase(s) as an algebraic expression and simplify if possible.

Let x represent the unknown number.

17) The difference of fourteen and a number, divided by four

17) _____

Solve.

18) Lauren scored 13 points in her basketball game on Monday, 9 on Wednesday, 10 on Friday, and 3 on Saturday. Find her total points scored for the week.

18) _____

Use the distributive property to write the sum as a product.

19) $15 \cdot z + 15 \cdot 5$

19) _____

Solve the equation. Don't forget to first simplify each side of the equation, if possible.

20) $4(2z - 3) = 7(z + 2)$

20) _____

Solve.

21) If the sum of a number and nine is doubled, the result is two less than three times the number. Find the number.

21) _____

22) In a recent International Gymnastics competition, the U.S., China, and Romania were the big winners. If the total number of medals won by each team are three consecutive integers whose sum is 42 and the U.S. won more than China who won more than Romania, how many medals did each team win?

22) _____

Solve the equation.

23) $\frac{r + 6}{3} = \frac{r + 8}{6}$

23) _____

24) $4y = 3y - 8.1$

24) _____

Substitute the given values into the formula and solve for the unknown variable.

25) $P = 2L + 2W$; $P = 24$, $W = 5$

25) _____