

4. (1 point)

Translate the following phrase into a math expression or equation (whichever is appropriate). Use x to represent the unknown number.

ten increased by a number

8. (1 point)

Translate the following phrase into a math expression or equation (whichever is appropriate). Use x to represent the unknown number.

one sixth of a number

12. (1 point)

Translate the following sentence into a math equation. Use x to represent the unknown number.

The quotient of four and a number is one ninth.

16. (1 point)

Translate the following phrase into a math expression or equation (whichever is appropriate). Use x to represent the unknown number.

Seven less than the product of two sevenths and a number gives two thirds of that number.

20. (1 point)

Evaluate the expression for $q = -9$.

$-6q =$ _____

24. (1 point)

Evaluate the following expression for $x = -8$ and $y = -10$

$x^2 + 4xy + y^2$

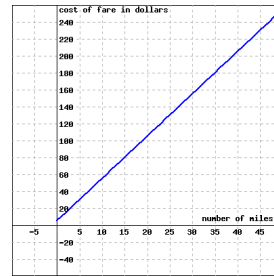
The expression evaluates to _____.

28. (1 point)

A taxi driver charges \$5.00 just to get in the cab and \$5.00 per mile. To find the total cost of a taxicab ride we use the formula

$$C = 5M + 5$$

where C is the fare in dollars and M is the number of miles traveled. Below is a graph of this equation.



What will the charge be to go 29 miles? (Use the formula to find the exact value.)

The total charge will be _____.

Use the graph to estimate how many miles you can travel for \$200.00. (Use the graph to make an estimate; wiggly room is programmed into the question.)

You can travel about _____ miles.

32. (1 point)

Change the improper fraction $\frac{25}{3}$ into a mixed number.

36. (1 point)

Reduce the fraction $\frac{6}{14}$.

40. (1 point)

Add these two fractions: $\frac{7}{11} + \frac{7}{11}$

When needed, use an improper fraction in your answer. Don't use a mixed number.

44. (1 point)

Add these two fractions: $\frac{5}{9} + \frac{5}{6}$

When needed, use an improper fraction in your answer. Don't use a mixed number.

48. (1 point)

Add these two fractions: $-\frac{3}{10} + \frac{27}{40}$

When needed, use an improper fraction in your answer. Don't use a mixed number.

52. (1 point)

Subtract one fraction from the other: $\frac{7}{40} - \frac{19}{40}$

When needed, use an improper fraction in your answer. Don't use a mixed number.

56. (1 point)

Subtract one fraction from the other: $\frac{1}{6} - \frac{9}{10}$

When needed, use an improper fraction in your answer. Don't use a mixed number.

60. (1 point)

Add these together: $-4 + \frac{4}{9}$

When needed, use an improper fraction in your answer. Don't use a mixed number.

64. (1 point)

Multiply these two fractions: $\frac{6}{11} \cdot \frac{9}{8}$

If needed, use an improper fraction in your answer. Don't use a mixed number.

68. (1 point)

Multiply the integer with the fraction: $-20 \cdot \frac{2}{35}$

If needed, use an improper fraction in your answer. Don't use a mixed number.

72. (1 point)

Divide one fraction into the other: $\frac{1}{6} \div \left(-\frac{5}{4}\right)$

If needed, use an improper fraction in your answer. Don't use a mixed number.

76. (1 point) Which of the following are whole numbers? There may be more than one correct answer.

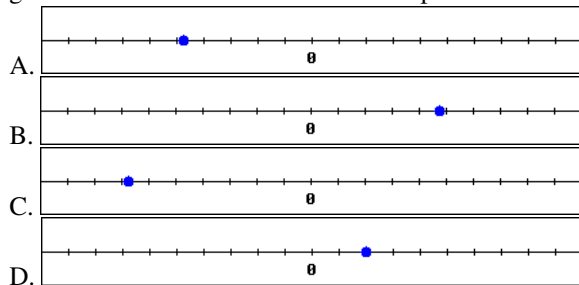
- A. $\sqrt{10}$
- B. $\sqrt{4}$
- C. 9.101001000100001...
- D. -6
- E. -74189
- F. -2.697
- G. 2
- H. $-\frac{7}{19}$

80. (1 point) Which of the following are real numbers? There may be more than one correct answer.

- A. 13611
- B. -96081
- C. $-3.\overline{339}$
- D. $-5.101001000100001\dots$
- E. $\sqrt{10}$
- F. 7
- G. 6.653
- H. -4

84. (1 point)

Choose the graph showing $\frac{19}{4}$ on the number line. If no scale is given assume tick marks are one unit apart.



- A
- B
- C
- D

88. (1 point)

Evaluate the following expressions which involve the absolute value:

1. $|8| = \underline{\hspace{2cm}}$
2. $|-1| = \underline{\hspace{2cm}}$
3. $|0| = \underline{\hspace{2cm}}$
4. $|17 + (-9)| = \underline{\hspace{2cm}}$
5. $|-6 - (-4)| = \underline{\hspace{2cm}}$

92. (1 point)

Simplify this expression. If it is already simplified, then write it as it is.

$$7x^2 + x$$
$$= \underline{\hspace{2cm}}$$

96. (1 point)

Use the distributive property to write an equivalent expression that has no grouping symbols.

$$-(m - 3)$$
$$= \underline{\hspace{2cm}}$$

100. (1 point)

Use the distributive property to simplify the expression completely.

$$6 - (-8n + 9)$$
$$= \underline{\hspace{2cm}}$$

104. (1 point)

The number of students enrolled in math courses at Portland Community College has grown over the years.

The formulas

$$M = 0.6x + 5.3 \qquad W = 0.35x + 5$$

describe the numbers (of thousands) of men and women enrolled in math courses at PCC x years after 2005. Give a simplified formula for the total number T of thousands of students at PCC taking math classes x years after 2005. Be sure to give the entire formula, starting with $T =$.

$$\underline{\hspace{2cm}}$$

108. (1 point)

Evaluate each of the following - if the result is undefined then say **undefined** (spelling counts).

- a. $\frac{-4}{-1} = \underline{\hspace{2cm}}$
- b. $\frac{10}{-1} = \underline{\hspace{2cm}}$
- c. $\frac{180}{-180} = \underline{\hspace{2cm}}$
- d. $\frac{-20}{-20} = \underline{\hspace{2cm}}$
- e. $\frac{10}{0} = \underline{\hspace{2cm}}$
- f. $\frac{0}{-10} = \underline{\hspace{2cm}}$

112. (1 point)

Subtract the following integers:

- $2 - 6 = \underline{\hspace{2cm}}$
- $7 - 3 = \underline{\hspace{2cm}}$
- $3 - 16 = \underline{\hspace{2cm}}$

116. (1 point)

Consider the following situation in which you borrow money from your cousin:

- On June 1st, you borrowed 1200 dollars from your cousin.
- On July 1st, you borrowed 500 more dollars from your cousin.
- On August 1st, you paid back 620 dollars to your cousin.
- On September 1st, you borrowed another 840 dollars from your cousin.

How much money do you owe your cousin now?

120. (1 point)

Evaluate the following expressions that have integer exponents:

- $2^2 = \underline{\hspace{2cm}}$
- $5^3 = \underline{\hspace{2cm}}$
- $(-4)^2 = \underline{\hspace{2cm}}$
- $(-2)^3 = \underline{\hspace{2cm}}$

124. (1 point)

Use the properties of exponents to simplify the following

$$2^9 \cdot 2^2$$

128. (1 point)

Use the properties of exponents to simplify the following

$$(20^8)^8$$

132. (1 point)

Use the properties of exponents to simplify the following

$$(5r^7)^2$$

136. (1 point)

Use the properties of exponents to simplify the following

$$-4(-8r^7)^2$$

140. (1 point)

Evaluate this expression:

$$2 - 3 \cdot 6 = \underline{\hspace{2cm}}$$

144. (1 point)

Evaluate these expressions:

- $(-3)^2 + 5 = \underline{\hspace{2cm}}$
- $-3^2 + 5 = \underline{\hspace{2cm}}$

148. (1 point)

Evaluate this expression:

$$(2 \cdot 3)^2 - 2 \cdot 3^2 = \underline{\hspace{2cm}}$$

152. (1 point)

Evaluate this expression:

$$-2^2 - 5[10 - (7 - 4^3)] = \underline{\hspace{2cm}}$$

156. (1 point)

Evaluate these expressions:

- $|6 - 3|^2 - |6 - 3^2| = \underline{\hspace{2cm}}$
- $(6 - 3)^2 - (6 - 3^2) = \underline{\hspace{2cm}}$

160. (1 point)

Evaluate this expression:

$$\frac{|27 + (-2)^3|}{-1} = \underline{\hspace{2cm}}$$

164. (1 point)

Evaluate this expression:

$$\left| \frac{1}{2} - \frac{5}{24} \right| - 5 \left| \frac{5}{24} - \frac{1}{2} \right| = \underline{\hspace{2cm}}$$