

Math 015 - Sample Final Exam

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Write the number in words.

1) 9,300,695

Add.

2) $7 + -17 + 4$

Write as an addition problem and find the sum.

3) The team gained 17 yards on the first play, lost 9 yards on the second, and then gained another 4 yards on the third. What was their net gain or loss?

Subtract.

4) $-15 - -7$

Simplify.

5) $5 + |-11| + 11$

6) $-8 + 5(2 - 4)$

7) $48 \div (-4)^2 + -9$

Evaluate the expression.

8) $\frac{x^2}{2z + y}$; when x is -5, y is -4, and z is -3.

Simplify the given expression. Write the answer with variables in alphabetical order and any constant term last.

9) $8xy^2 + 2xy + 9xy^2$

Simplify the given expression.

10) $4 + 3(4w + 5) - w$

Rewrite the following number using digits.

11) Forty-eight thousand, seventeen

Simplify each side of the equation, if possible. Then solve the equation.

12) $p - 7 = -3 + 8$

Solve the problem.

13) A baseball team played a total of 155 games last season. They had 13 fewer wins than losses. How many games did the team win?

Use the distributive property to help solve the given equation.

14) $-7(m - 4) = 0$

Solve the equation.

15) $20r + 4 = 4$

Write an algebraic expression, using x as the variable.

16) 5 less than 4 times a number

Solve the problem.

17) The sum of 6 and four times a number is -10. Find the number.

Write the fraction in lowest terms by using prime factorization.

18) $\frac{140}{160}$

Write your answer in lowest terms.

19) There are 45 participants in the dance program. What fraction of the program is 30 participants?

Divide. Write the quotient in lowest terms.

20) $\left(-\frac{5}{3}\right) \div \left(-\frac{1}{2}\right)$

Perform the indicated operation. Give the answer in lowest terms.

21) $\left(\frac{3z^3}{5}\right)\left(\frac{30}{z^2}\right)$

Find the sum or difference. Write the answer in lowest terms.

22) $\frac{5}{2} + \frac{4}{7}$

23) $\frac{2}{15} - \left(-\frac{1}{3}\right)$

First, round the mixed numbers to the nearest whole number and estimate the answer. Then find the exact answer and write it in simplest form.

24) $1\frac{1}{9} \cdot \frac{2}{5}$

Simplify.

25) $\frac{3}{8} \div \frac{1}{3} - \frac{3}{4}$

Solve the problem.

26) Ellen is knitting a scarf with one $2\frac{1}{5}$ -inch blue stripe, one $2\frac{1}{2}$ -inch green stripe, and one $1\frac{5}{9}$ -inch white stripe.

How wide is the scarf?

Solve the equation.

$$27) -\frac{1}{3}x = 12$$

$$28) x - \frac{10}{13} = -\frac{8}{13}$$

Write the decimal as a fraction or mixed number in lowest terms.

$$29) 5.4$$

Write the decimal in numbers.

$$30) \text{Seven thousand thirty and six hundredths}$$

Write the decimal in words.

$$31) 7.642$$

Round the number to the place indicated.

$$32) \text{Round to the nearest hundredth: } 9.3863$$

Perform the indicated operation.

$$33) -1.338 + 0.751$$

Multiply.

$$34) \begin{array}{r} 0.07 \\ \times 0.6 \\ \hline \end{array}$$

Divide.

$$35) \frac{-3.5}{-0.5}$$

Solve.

$$36) \text{A person burns 11.3 calories per minute while walking. One must burn about 3500 calories in order to lose 1 lb. How many pounds would the person lose by walking for 8 hours? Round your answer to the nearest hundredth.}$$

Solve the equation.

$$37) -5.6q = -51.6 - 1.3q$$

For the given figure, find the ratio of the length of the longest side to the length of the shortest side. Write the ratio as a fraction in lowest terms.

38)



$$A = 19 \text{ inches}$$

$$B = 9 \text{ inches}$$

$$C = 18 \text{ inches}$$

Find the unit rate.

- 39) \$840 earned in 3 weeks

Write the ratio in lowest terms in order to decide whether the proportion is true or false.

40) $\frac{28}{6} = \frac{42}{9}$

Find the unknown number in the proportion. Round answer to the nearest hundredth when necessary.

41) $\frac{4}{x} = \frac{16}{20}$

Use a proportion to solve the problem.

- 42) On a map of the Thunderbird Country Club golf course, 1.5 inches represent 60 yards. How long is the 8th hole if the map shows 9.5 inches?

- 43) The ratio of the distances a driver and a 2-iron will drive a golf ball is 5 to 4. If a golfer averages 208 yards with a 2-iron, how far should she average with a driver?

Write the decimal as a percent.

- 44) 0.245

Write the percent as a fraction or mixed number in lowest terms.

- 45) 25%

Solve the problem.

- 46) Biologists banded six out of every twenty wild ducks. What percent were not banded?

Write and solve an equation to answer the question. Round your answer to the nearest whole number, if necessary.

- 47) 16 workers is 1% of what number of workers?

Write and solve an equation to answer the question. Round percent to the nearest thousandth, if necessary.

- 48) A chemical solution contains 9% calcium. How much calcium is in 2.5 mL of solution?

Solve the problem.

- 49) Moe, Larry and Curly shared a \$45 restaurant bill. They left a 15% tip. If they divided the total cost evenly, how much did each person pay, rounded to the nearest cent?

Find the area.

- 50)

