

Name _____

Multiple choice. Choose the alternative that best answers the question.

Evaluate the following:

Solve the equation:

1) $3u - 6 = 9$

- A) 5 B) 1 C) 15 D) -5

Write a proportion that can be used to solve the problem, then solve the equation.

- 2) It takes Betsy 30 minutes to grade 16 math tests. Find out how long it takes her to grade 48 math tests. Round to the nearest whole number.

- A) 62 Minutes B) 10 Minutes C) 48 Minutes D) 90 Minutes

Simplify the following expression:

3) $-3(2y - 5) + 6(3y + 1)$

- A) $12y - 14$ B) $12y - 4$ C) $24y - 9$ D) $12y + 21$

Evaluate

4) $5^2 - 3(2) + 30 \div 6$

- A) 49/6 B) 49 C) 24 D) 5

Express each statement as an algebraic expression:

- 5) Beyonce is x years old. Write an expression that represents Bono's age if Bono is 6 years older than Beyonce.

- A) $x + 6$ B) $6x$ C) $x - 6$ D) $x/6$

Find the slope of the line between the given points:

- 6) (3,2) and (5,9)

- A) $m = \frac{2}{7}$ B) $m = -\frac{2}{7}$ C) $m = \frac{7}{2}$ D) $m = -\frac{7}{2}$

Determine the y-intercept of the line represented by the equation.

7) $y - 3x = 4$

- A) 4 B) (0,-4) C) (0,4) D) $m = -3$

Set up an equation that can be used to store the problem . Solve the equation.

8) When Miley Cyrus got promoted, she received an 8% pay raise. She now earns \$64,800 per week. What was her weekly salary before the raise?

- A) \$4800 B) \$60,000 C) \$69,600 D) \$8000

Simplify:

9) $(-3)^0$

- A) -1 B) 0 C) Undefined D) 1

Multiply:

10) $(2x - 3)(x + 2)$

- A) $2x^2 - 6$ B) $2x^2 + x + 6$ C) $2x - 6$ D) $2x^2 + x - 6$

Divide:

11) $\frac{4x^6 + 12x^4 - 24x^2}{2x}$

- A) $x^5 + x^2 - x$ B) $2x^5 + 6x^2 - 12x$
C) $2x^5 + 6x^4 - 12x^2$ D) $2x^7 + 6x^3 - 12x^2$

Simplify:

12) $(x^2y^{-3})^2$

- A) $\frac{x^4}{y}$ B) x^4y^{-3} C) $\frac{x^4}{y^6}$ D) $\frac{y^6}{x^4}$

Add or subtract:

13) $\frac{x}{2x + 6} + \frac{3}{2x + 6}$

A) $\frac{1}{2}$

B) 1

C) $\frac{x+3}{2x+6}$

D) $\frac{3x}{2x+6}$

Simplify:

14) $\sqrt{48x^2}$

A) $x\sqrt{48}$

B) $4x\sqrt{3}$

C) $4\sqrt{3x^2}$

D) $7x$

Use the Pythagorean theorem to find the indicated quantity. Round your answer to the nearest 100th.

15) If the lengths of the legs of a right triangle are 7 and 24 units, find the length of the hypotenuse.

A) $c = 25$

B) $c = 625$

C) $c = 22.96$

D) $c = 15.50$

Free Response: Include all important steps in arriving at your answer. Circle Your final answer.

Solve the inequality. Give the answer in both interval and graph notation.

16) $x - 4 \geq 3$

Graph the equation. Include all intercepts.

17) $3x - 6y = 12$



Solve the following system of equations:

18) $x + 5y = 8$

$-x + y = 4$

Factor the following polynomial completely. If it is prime, say so.

19) $x^2 - 9x + 14$

Solve the following problem:

20) The perimeter of a rectangular room is 100 feet. Find the length and width of the room if the length is 2 feet more than 3 times the width.