

Name: _____

1. Is this true for all non-zero values of the variables?

$$\frac{a + b}{a} = b$$

- (a) True
(b) False

2. Is the following equality true or false for all non-zero values of the variables?

$$\frac{c * (d + e)}{e} = c * d$$

- (a) True
(b) False

3. Is the following equality true or false?

$$2^1 = 2$$

- (a) True
(b) False

4. What is the power of y in the following expression?

$$(x^2 * y^9 * z^1)^3 * (x^7 * y^5 * z^4)^3$$

- a) 42
b) 20
c) 405
d) 27

5. Which of the following expressions is equivalent to

$$(x^3 * y^5 * z^6)/(x^6 * y^{-2} * z^3)?$$

- a) $x^{-3} * y^7 * z^3$
- b) $x^{-3} * y^3 * z^3$
- c) $(x^9) * (y^7) * (z^3)$
- d) $(x^9) * (y^3) * (z^9)$

6. Which of the following fractions is equivalent to

$$\frac{3}{18} + \frac{8}{16}?$$

- a) 192/34
- b) 192/288
- c) 11/288
- d) 11/34
- e) 176/288

7. Completely factor the expression

$$1x^2 + 8x - 20$$

into the product of linear factors.

8. Simplify then completely factor the following expression. Your answer should be of the form

$$Au^n(Bu^m + C)$$

$$\frac{7u^8 + 2u^6}{u^2}$$

9. Solve the following equation

$$7(x + 2) = 2x + 54.$$

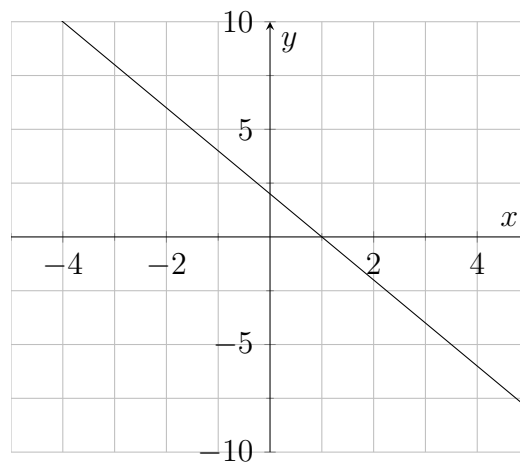
10. Solve the following inequality for x .

$$1(x + 1) \leq 18x - 6.$$

11. Given $y = 4x + 1$ and $x = 2t + 3$, write y in terms of t .

12. Find the equation of the line passing through the points $(0, 8)$ and $(5, 33)$.

13. Choose the equation that matches the following graph.



- a) $2x - 2$
- b) $-2x + 2$
- c) $-2x - 2$
- d) $2x + 2$

14. Solve the following system of linear equations

$$3x + 3y = 36$$

$$4x - 2y = 30$$