Name:_____

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

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

   (a) True
   (b) False

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

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

   (a) True
   (b) False

3. Is the following equality true or false?

$$5^1 = 1$$

   (a) True
   (b) False

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

$$(x^4 * y^{10} * z^5)^4 * (x^1 * y^{-6} * z^{-7})^{-8}$$

   a) 1
   b) 8
   c) -128
   d) 0

5. Which of the following expressions is equivalent to

$$(x^{-7} * y^{-6} * z^3)/(x^5 * y^6 * z^0)?$$

a) $x^{-12} * y^0 * z^3$
b) $x^{-12} * y^{-12} * z^3$
c) $(x^{-2}) * (y^{-12}) * (z^3)$
d) $(x^{-2}) * (y^0) * (z^3)$

6. Which of the following fractions is equivalent to

$$\frac{1}{2} + \frac{2}{5} + \frac{5}{6}?$$

a) 104/13
b) 104/60
c) 8/60
d) 8/13
e) 42/60

7. Completely factor the expression

$$1x^2 + 3x - 40$$

into the product of linear factors.

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

$$Ay^n(By^m + C)$$

.

$$\frac{9y^7 + 7y^5}{y^1}$$

9. Solve the following equation

$$4(x+1) = 3x + 10.$$

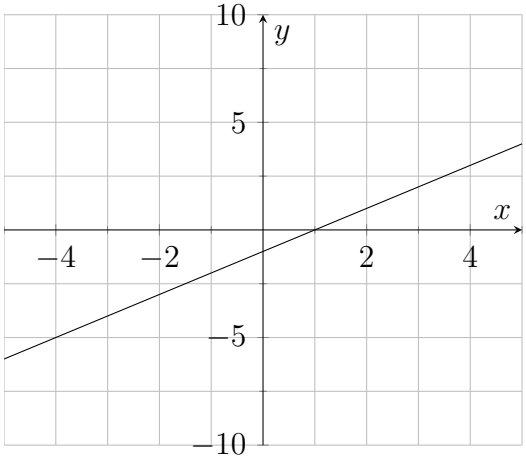
10. Solve the following inequality for x.

$$7(x+4) > 18x - 3.$$

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

12. Find the equation of the line passing through the points $(-3, 1)$ and $(-7, -3)$.

13. Choose the equation that matches the following graph.



a) -1 x + 1
b) 1 x + -1
c) 1 x - -1
d) -1 x - 1

14. Solve the following system of linear equations

$$4x + -5y = 27$$

$$3x + -3y = 21$$