

1. $x^2 + 5x + 4, x = -2$

2. $-x + 2y, x = 4, y = -4$

3. $10 + 2 * 5^2$

4. $2 + 10 \div 5 + 2 * 3$

5. $[4 + 3(16 - 8) \div 4] - 2$

6. $0.9765 * 1000$

7. $0.2345 \div 100$

8. $-2x - 4x$

9. $3 + 2x = -7$

10. $|-4| - 6$

11. $(-4)^2$

12. -3^2

13. $-2(3x - 2y - 5)$

14. $(x + 3)(x - 3)$

15. $(2x - 3y)^2$

16. $x \cdot x^3 \cdot x^5$

17. $\frac{4}{5} \div \frac{3}{10}$

18. $(3x)^2$

19. $(x^5)^5$

20. $(x^3)^{-2}$

21. $\frac{9x^7y^9}{3x^4y^{19}}$

39. graph $y = -7$

22. $\frac{z}{5} = \frac{x}{30}$

40. Find slope $y = -\frac{2}{5}x + 1$

23. $-3x - 7 = 8(x - 5)$

41.

24. $4 + x = 9x - 4$

$(-2xy^3)^3$

25. $2x^3(3x + 5x^3)$

42. $(2xy)(-3x^2y)$

26. $(-2x^2 - 3x + 1) - (4x^2 - 9x - 7)$

43.

27. $\frac{3}{5}x = 6$

Solve

28. $A = 4B + 5C$

$C =$

29. $(2x + 3)(5 - x) = 0$

Solve

30. $\sqrt{36x^{10}}$

simplify

31. $\sqrt{\frac{4}{25}}$

simplify

32. $\sqrt{x - 2} = 4$

Solve

33. $A = \pi r^2, r = 10$

34. $x^2 + 14x + 24$ factor

35. for 36 and 60 find GCF

36. 28% as fraction Simplified

37. $-3x - 5(2z - 5x) + 4z$ simplify

38. $-2x < 6$ graph (solve)

$2x + 1 = 4x + 1$

$$\textcircled{1} x^2 + 5x + 4 \quad x = -2$$

$$(-2)^2 + 5(-2) + 4 =$$

$$(-2)(-2) + 5(-2) + 4 =$$

$$4 - 10 + 4 =$$

$$-6 + 4 =$$

$$\textcircled{-2 =}$$

$$\textcircled{2} -x + 2y \quad , x = 4, y = -4$$

$$-(4) + 2(-4) =$$

$$-4 - 8 =$$

$$\textcircled{-12 =}$$

$$\textcircled{3} 10 + 2 \times 5^2 =$$

$$10 + 2 \times (5)(5) =$$

$$10 + 2(25) =$$

$$10 + 50 =$$

$$\textcircled{60 =}$$

$$\textcircled{4} 2 + 10 \div 5 + 2 \times 3 =$$

$$2 + 2 + 2 \times 3 =$$

$$2 + 2 + 6 =$$

$$4 + 6 =$$

$$\textcircled{10 =}$$

$$5. [4 + 3(16 - 8) \div 4] - 2 =$$

$$[4 + 3(8) \div 4] - 2 =$$

$$[4 + 24 \div 4] - 2 =$$

$$[4 + 6] - 2 =$$

$$[10] - 2 =$$

$$10 - 2 =$$

$$8 =$$

$$6. 0.9765 \times 1000 =$$

$$976.5 =$$

↑ Move decimal three times

$$7. 0.2345 \div 100 =$$

$$.002345 =$$

move decimal left 2 times

$$8. -2x - 4x =$$

$$-6x =$$

$$9. 3 + 2x = -7$$

$$\cancel{3} + 2x - \cancel{3} = -7 - 3$$

$$2x = -10$$

$$\frac{2x}{2} = \frac{-10}{2}$$

$$x = -5$$

$$10. \quad |-4| - 6 =$$

$$(4) - 6 =$$

$$4 - 6 =$$

$$\underline{-2 =}$$

$$11. \quad (-4)^2 =$$

$$(-4)(-4) =$$

$$(16) =$$

$$\underline{16 =}$$

$$12. \quad -3^2 =$$

$$-(3)(3) =$$

$$-(9) =$$

$$\underline{-9 =}$$

$$13. \quad -2(3x - 2y - 5) =$$

$$\underline{-6x + 4y + 10 =}$$

$$14. \quad (x+3)(x-3) =$$

$$x^2 - 3x + 3x - 9 =$$

$$\underline{x^2 - 9 =}$$

$$15. (2x-3y)^2 =$$

$$(2x-3y)(2x-3y) =$$

$$4x^2 - 6xy - 6xy + 9y^2 =$$

$$4x^2 - 12xy + 9y^2 =$$

16

$$x \cdot x^3 \cdot x^5 =$$

$$x^1 \cdot x^3 \cdot x^5 =$$

$$1+3+5$$

$$x^9 =$$

$$x^9 =$$

17.

$$\frac{4}{5} \div \frac{3}{10} =$$

$$\frac{4}{5} \cdot \frac{10}{3} =$$

$$\frac{(2)(2)}{(5)} \cdot \frac{(2)(5)}{(3)} =$$

$$\frac{(2)(2)}{\cancel{(5)}} \cdot \frac{(2)(\cancel{5})}{(3)} =$$

$$\frac{8}{3} =$$

$$18. (3x)^2 =$$

$$(3x)(3x) =$$

$$9x^2 =$$

$$19. (x^5)^5 =$$

$$x^{(5)(5)} =$$

$$x^{25} =$$

$$20. (x^3)^{-2} =$$

$$x^{(3)(-2)} =$$

$$x^{-6} =$$

$$21. \frac{9x^7y^9}{3x^4y^{19}} =$$

$$\frac{\cancel{(3)}\cancel{(3)}x^{7-4}}{\cancel{(3)}y^{19-9}} = \text{st write}$$

$$\frac{3x^3}{y^{10}} =$$

$$\textcircled{22} \quad \frac{2}{5} = \frac{x}{30}$$

$$2(30) = 5(x) \text{ cross mult}$$

$$60 = 5x$$

$$\frac{60}{5} = \frac{5x}{5}$$

$$\textcircled{12 = x}$$

$$\begin{array}{r} \textcircled{12} \\ \hline 5 \overline{)60} \\ \underline{-(5)} \\ 10 \\ \underline{-(10)} \\ 0 \text{ rem} \end{array}$$

$\textcircled{23}$

$$-3x - 7 = 8(x - 5)$$

$$-3x - 7 = 8x - 40$$

$$-3x - \cancel{7} + \cancel{7} = 8x - 40 + 7$$

$$-3x = 8x - 33$$

$$-3x - 8x = 8x - 33 - 8x$$

$$-11x = -33$$

$$\frac{-11x}{-11} = \frac{-33}{-11}$$

$$\textcircled{x = 3}$$

$$\textcircled{24.} \quad 4 + x = 9x - 4$$

$$\cancel{4} + x - \cancel{4} = 9x - 4 - 4$$

$$x = 9x - 8$$

$$1x = 9x - 8$$

$$1x - 9x = \cancel{9x} - 8 - \cancel{9x}$$

$$-8x = -8$$

$$\frac{-8x}{-8} = \frac{-8}{-8}$$

$$x = 1$$

$$\textcircled{25.} \quad 2x^3(3x + 5x^3) =$$

$$2x^3(3x^1 + 5x^3) =$$

$$6x^{3+1} + 10x^{3+3} =$$

$$6x^4 + 10x^6 =$$

$$\textcircled{26.} \quad (-2x^2 - 3x + 1) - (4x^2 - 9x - 7) =$$

$$-2x^2 - 3x + 1 - 4x^2 + 9x + 7 =$$

$$-6x^2 + 6x + 8 =$$

$$(27) \quad \frac{3}{5}x = 6$$

$$\frac{5}{2} \left(\frac{3x}{5} \right) = \frac{5}{3} \left(\frac{6}{1} \right)$$

$$x = \frac{30}{3}$$

$$x = 10$$

$$(28) \quad A = 4B + 5C \quad \text{Solve for } C =$$

$$A - 4B = 4B + 5C - 4B$$

$$A - 4B = 5C$$

$$\frac{A - 4B}{5} = \frac{5C}{5}$$

$$\frac{A - 4B}{5} = C$$

$$(29) \quad (2x+3)(5-x) = 0$$

$$\text{Let } 2x+3=0 \quad \text{OR} \quad 5-x=0$$

$$2x + \cancel{3} - \cancel{3} = 0 - 3 \quad \text{OR} \quad \cancel{5} - x - \cancel{5} = 0 - 5$$

$$2x = -3 \quad \text{OR} \quad -x = -5$$

$$\frac{2x}{2} = \frac{-3}{2} \quad \text{OR} \quad \frac{-x}{-1} = \frac{-5}{-1}$$

$$x = \frac{-3}{2}$$

$$x = 5$$

$$\textcircled{30} \sqrt{36x^{10}}$$

$$\sqrt[2]{36x^{10}}$$

$$6x^{\frac{10}{2}} \text{ divide power by 2}$$

$$\textcircled{6x^5}$$

$$\textcircled{31} \sqrt{\frac{4}{25}}$$

$$\frac{\sqrt{4}}{\sqrt{25}}$$

$$\textcircled{\frac{2}{5}}$$

$$\textcircled{32} \sqrt{x-2} = 4$$

$$(\sqrt{x-2})^2 = (4)^2$$

$$x-2 = 16$$

$$x - \cancel{2} + \cancel{2} = 16 + 2$$

$$\textcircled{x = 18}$$

33) $A = \pi r^2$, $r = 10$

$$A = \pi (10)^2$$

$$A = \pi (10)(10)$$

$$A = \pi (100)$$

$$A = 100\pi$$

34) $x^2 + 14x + 24 =$

factor

$$(x+2)(x+12) =$$

answer

- Possible factor
- 24 · 1
 - 12 · 2
 - 6 · 4
 - 3 · 8

check answer

foil $(x+2)(x+12) =$

$$x^2 + 12x + 2x + 24 =$$

$$x^2 + 14x + 24 =$$



all math

factor means Anti-foil

35) for 36 and 60 find GCF

Primes, 2, 3, 5, 7, ...

$$\text{GCF} = 12$$

$$\begin{array}{r} 2 \overline{)36} \\ 2 \overline{)18} \\ 3 \overline{)9} \\ 3 \overline{)3} \\ 1 \end{array} \quad \begin{array}{r} 2 \overline{)60} \\ 2 \overline{)30} \\ 3 \overline{)15} \\ 5 \overline{)5} \\ 1 \end{array}$$

$$36 = 2 \cdot 2 \cdot 3 \cdot 3$$

$$60 = 2 \cdot 2 \cdot 3 \cdot 5$$

$$\text{GCF} = 2 \cdot 2 \cdot 3 = 12$$

36) 28% as a fraction simplified

Primes, 2, 3, 5, 7, ...

$$\frac{28}{100} = ?$$

$$\frac{(2)(2)(7)}{(2)(2)(5)(5)} =$$

$$\frac{7}{25} = \text{simplified fraction}$$

$$\begin{array}{r} 2 \overline{)28} \\ 2 \overline{)14} \\ 7 \overline{)7} \\ 1 \end{array} \quad \begin{array}{r} 2 \overline{)100} \\ 2 \overline{)50} \\ 5 \overline{)25} \\ 5 \overline{)5} \\ 1 \end{array}$$

$$28 = 2 \cdot 2 \cdot 7$$

$$100 = 2 \cdot 2 \cdot 5 \cdot 5$$

$$\textcircled{37.} \quad -3x - 5(2z - 5x) + 4z =$$

$$-3x - 10z + 25x + 4z =$$

$$22x - 6z =$$

$$\textcircled{38.} \quad -2x < 6$$

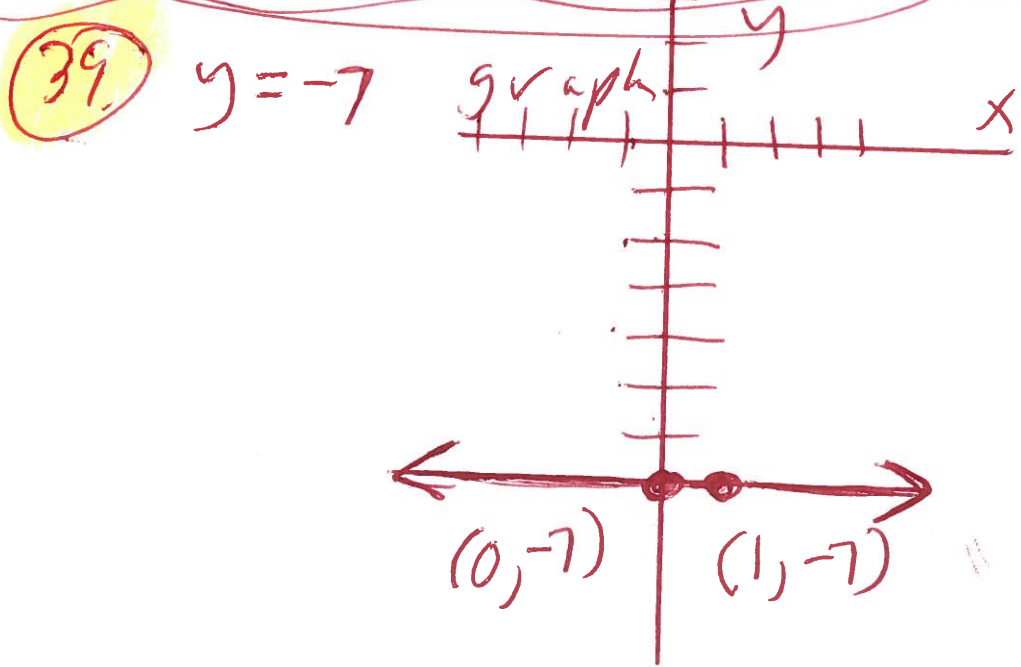
$$\frac{-2x}{-2} > \frac{6}{-2}$$

divide by a negative
and turn the alligator
around

$$x > -3$$



$$(-3, \infty)$$



X	y
0	-7
1	-7

40. Find slope

$$y = -\frac{2}{5}x + 1$$



$$\text{Slope} = m = -\frac{2}{5}$$

and

$$y\text{-intercept} = 1 = b$$

formula
Slope-intercept
 $y = mx + b$

$$\text{Slope} = m \text{ and } y\text{-intercept} = b$$

41.

$$(-2xy^3)^3 =$$

$$((-2)^1 x^1 y^3)^3 =$$

$$(-2)^{(1)(3)} x^{(1)(3)} y^{(3)(3)} = \text{Mult powers}$$

$$(-2)^3 x^3 y^9 =$$

$$(-2)(-2)(-2) x^3 y^9 =$$

$$(4)(-2) x^3 y^9 =$$

$$-8 x^3 y^9 =$$

42.

$$(2xy)(-3x^2y) =$$

$$(2x^1y^1)(-3x^2y^1) = \text{write}$$

$$-6x^{1+2}y^{1+1} =$$

$$-6x^3y^2 =$$

Last one

43.

$$2x + 1 = 4x + 1$$

$$2x + \cancel{1} = 4x + \cancel{1}$$

$$2x = 4x$$

$$2x - 4x = 4x - 4x$$

$$-2x = 0$$

$$\frac{-2x}{-2} = \frac{0}{-2}$$

$$x = 0$$