ALGEBRA 2 Hollie Thompson

Combine Terms

EX 1) $7x - 5y - 4x + 3y$

$7x - 5y - 4x + 3y$

$3x - 2y$

EX 2) **Simplify:** $2a^3 - 10ab^2 + 3a^3 - ab^2 - 7$

$2a^3 - 10ab^2 + 3a^3 - ab^2 - 7$

$= 2a^3 + 3a^3 - 10ab^2 - 1ab^2 - 7$

$= 5a^3 - 11ab^2 - 7$

$= \mathbf{5a^3 - 11ab^2 - 7}$

SOLVING EQUATIONS

EX 1) $6x + 15 = 3x + 8$

$-3x \quad -3x$

ditch the smallest x guy

$3x + 15 = 8$

$-15 \quad -15$

ditch the 15

$3x = -7$

$\frac{3x}{3} = \frac{-7}{3}$

ditch the 3

$x = \frac{-7}{3}$

EX 2) $9 - 3x = 5x + 6$

$+3x \quad +3x$

$9 = 8x + 6$

ditch the 6

$-6 \quad -6$

$3 = 8x$

ditch the 8

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

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

EX 3) $3x+5=6(x+4)$ *DISTRIBUTE FIRST*

$3x+5=6x+24$ ← Be careful here too!

ditch the $3x$: $-3x \quad -3x$

$5=3x+24$

ditch the 24: $-24 \quad -24$

$-19=3x$

ditch the 3: $\frac{-19}{3}=\frac{3x}{3}$

$\frac{-19}{3}=x$

EX 4) $3(2x+5)=4x+7-x+1$

distribute; add like terms

$6x+15=3x+8$ ditch the smallest x guy: $-3x \quad -3x$

$3x+15=8$ ditch the 15: $-15 \quad -15$

$3x=-7$

$\frac{3x}{3}=\frac{-7}{3}$ ditch the 3

$x=\frac{-7}{3}$

EX 5) Solve $5x-3+6x+1=5-2(x+4)$

Clean up both sides...

$11x-2=5-2x-8$

$11x-2=-2x-3$ ditch the smallest x guy: $+2x \quad +2x$

$13x-2=-3$ ditch the -2: $+2 \quad +2$

$13x=-1$

$\frac{13x}{13}=\frac{-1}{13}$ ditch the 13

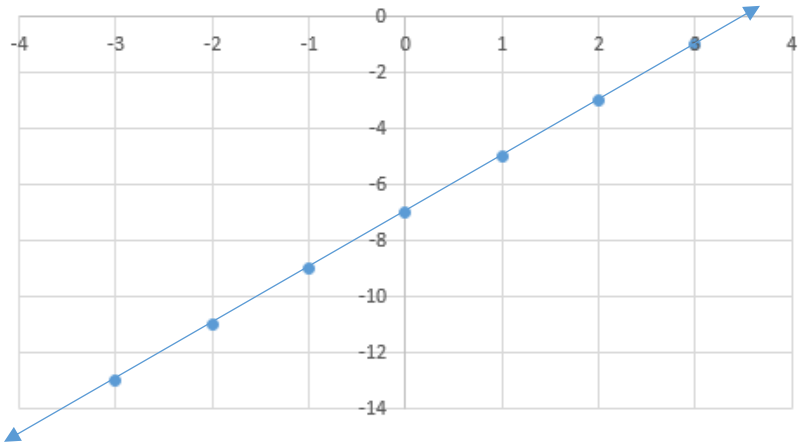
$x=\frac{-1}{13}$

GRAPH BY PLOTTING POINTS

Ex: 1. y = 2x- 7

x	y
-3	-13
-2	-11
-1	-9
0	-7
1	-5
2	-3
3	-1

2(-3) – 7 = -13
2(-2) – 7 = -11
2(-1) – 7 = -9
2(0) – 7 = -7
2(1) – 7 = -5
2(2) – 7 = -3
2(3) – 7 = -1



Ex: 2. y= -6x + 4

x	y
-3	22
-2	16
-1	10
0	4
1	-2
2	-8
3	-12

-6(-3) +4= 22
-6(-2) +4= 16
-6(-1) +4= 10
-6(0) +4 = 4
-6(1) +4 = -2
-6(2) +4 = -8
-6(3) +4 = -12