Linear Unit Part 1: Solving Equations

Solving 1 step equations with addition and subtraction	A) $x + 9 = 12$ B) $x - 3 = 11$ C) $-12 = 12 + x$ D) $-15 = -13 + x$ E) $14 + x = -7$ F) $7 = x + 10$

Solving 1 step equations with multiplication and division.	A) $4x = 16$	B) $30 = -5x$
	C) $-3x = -60$	
	$D)\quad \frac{x}{5} = 3$	$E)\quad \frac{x}{-4} = 5$
	$D)\quad \frac{3}{4}x = 5$	$E)\quad \frac{-5}{3}x = -2$

Solving 2 step equations Adding or Subtracting First	1. $4x+6=14$ 2. $-p+7=-13$ 3. $9=\frac{r}{-3}+4$ 4. $\frac{x}{4}-5=10$ 5. $5=-6+\frac{x}{2}$ 6. $3x+5=32$

Solving 2 step equations Getting rid of fractions first	1. $9=\frac{x}{2}+4$ 2. $9=\frac{x}{2}+4$ 3. $\frac{x}{-3}-2=5$ 4. $\frac{x}{-3}-2=5$

Multi-Step Equations with distributive property (no negative coefficients) - Do 2 with Distributive Property First - Do 2 with Dividing First	1. $5(3x + 3) = 75$ 3. $3(5x – 4) = 48$	2. $3(2x + 4) = 30$ 4. $2(3x – 2) = 26$
Multi-Step Equations with distributive property (negative coefficients)	1. $-5(4x + 4) = 80$ 3. $-3(-4x – 4) = 24$	2. $4(-5x + 4) = 76$ 4. $2(-2x – 3) = 24$

Solving equations with the distributive property and fractions	1. $\frac{2}{3}(x-5)=6$ 2. $\frac{5}{4}(x-1)=10$	1. $\frac{2}{3}(x-5)=6$ 2. $\frac{5}{4}(x-1)=10$

Evaluate the function for the given value of x	1. If x = 2 find the value of f(x) = 3x + 2 2. If x = -3 find the value of f(x) = -2x – 4
Solve for x given the value of f(x)	3. If f(x) = 4 find the value of x if f(x) = 5x – 3 4. If f(x) = -5 find the value of x if f(x) = -2x + 11 5. If f(x) = 2 find the value of x if $f(x) = \frac{x}{3} - 4$

Multi-Step Equations with like terms on the same side(no negative coefficients)	1. $-12 + 3x + 2x = 3$ 2. $x - 6 + 2x = 3$ 3. $3x - 2 - x = 4$ 4. $x + 3x - 16 = 4$
Multi-Step Equations with like terms on the same side(negative coefficients)	1. $-1 + x - 3x = 5$ 2. $-x - 9 + 3x = 3$ 3. $-3x - 23 + 2x = 7$ 4. $-x - 3x + 16 = 4$

Multi-Step Equations with distributive property and like terms on the same side(no negative coefficients)	1. $4x + 7(x - 3) = 34$ 2. $2x + 3(2x - 4) = 44$ 3. $3x + 2(x + 2) = 49$ 4. $2x + 7(x - 2) = 31$

Multi-Step Equations with distributive property and like terms on the same side(negative coefficients)	1. $-4x + 5(-x + 4) = 34$ 2. $-2x + 4(-2x – 2) = 44$ 3. $-3x - 2(2x + 3) = 48$ 4. $4x - 7(x – 2) = 31$

Multi-Step Equations with like terms on both sides without distributive property	1. $5x = 3x - 8$	2. $6x = 4x - 12$
	3) $7x - 2 = 5x + 10$	4) $-7x + 15 = -3 + 2x$
	5) $3x - 21 = -2x + 9$	6) $2x - 9 = -3x + 6$
	7) $-23 + 2x = -3x + 7$	8) $-6 + 2x = 3 - x$

Multi-Step Equations with like terms on both sides with distributive property	1. $2(x - 5) = 3x + 1$ 2. $5(x + 3) = 2x - 9$ 1. $4(x+3)=2(x-6)$ 2. $3(x+2)=4(x-10)$ 3. $-9(x-4)=-(x+20)$

Multi-Step Equations anything goes	1. $4x-3+2x=8x-3-x$ 2. $8y+6-12y=2y+9-3y$

Multi-Step Equations anything goes	3. $9(w-4)-7w=5(3w-2)$ 4) $5-3(x-7)=2(2-x)-8$