S-A1 Algebra 1 Session 7 7/1

1.) $x + 4 = 12$
$-4 \quad -4$

$x = 8$

2.) $x - 9 = 23$
$+9 \quad +9$

$x = 32$

3.) $7\left(\frac{x}{7}\right) = (3)7$

$x = 21$

4.) $\frac{9x}{9} = \frac{45}{9}$

$x = 5$

1.) $3x - 4 = 8$
$+4 \quad +4$

$\frac{3x}{3} = \frac{12}{3}$

$x = 4$

2.) $\frac{x}{4} + 3 = 10$
$-3 \quad -3$

$4\left(\frac{x}{4}\right) = (7)4$

$x = 28$

3.) $4a + 1 = 13$
$-1 \quad -1$

$\frac{4a}{4} = \frac{12}{4}$

$a = 3$

4.) $2\left(\frac{x-3}{2}\right) = (5)2$

$x - 3 = 10$
$+3 \quad +3$

$x = 13$

5.)  Solve 

constant

$3a + 5 - x + 7x - 2a$ "simplify"

COMBINE LIKE TERMS

$3a - 2a \qquad -x + 7x$

$a + 5 + 6x$

by conventions, variables go first in alphabetical order.

$a + 6x + 5$

$a + 5 + 6x$ [commutative property]

Simplify.

$2x - 5 + 3a - 5x + 10a$

$2x - 5x \quad 3a + 10a$

$-3x + 13a - 5$

$$13a - 3x - 5$$

Simplify.

$7b - b - x - 2x - 7b$

$7b - b - 7b \quad -x - 2x$

$-b \quad -3x$

$$-b - 3x$$

$-4x + 3(2x - 5) = 31$

$-4x + 6x - 15 = 31$

$2x - 15 = 31$

$+15 \quad +15$

$\frac{2x}{2} = \frac{46}{2}$

$x = 23$

1.) Distribute "slap"

2.) Combine like terms "be racist" ☹ bad!!

3.) Two step solve "Dub step"

$13 + 2(5c - 2) = 29$

$13 + 10c - 4 = 29$

$13 + (-4) = 9$

$10c + 9 = 29$

$-9 \quad -9$

$\frac{10c}{10} = \frac{20}{10}$

$c = 2$

$10c = \underbrace{c+c+c+c+c+c+c+c+c+c}_{10c}$

10 CANDY $+ \$9 = \$29$

$5(t-3) - 2t = -30$

$5t - 15 - 2t = -30$

$3t - 15 = -30$

$+15 \quad +15$

$\frac{3t}{3} = \frac{-15}{3}$

$t = -5$

$\frac{2}{5}(5k + 35) - 8 = 12$

$\frac{2}{5} \cdot \frac{5k}{1} \quad \frac{2}{5} * \frac{35}{1}$

$2k + 14 - 8 = 12$

$2k + 6 = 12$

$-6 \quad -6$

$\frac{2k}{2} = \frac{6}{2}$

$k = 3$

Hamster stole Nate's candy bar

$20^{mi}/_{hr}$ for 3 hours

Nate chased Hamstr going $50^{mi}/_{hr}$

How long before Nate catches the Hamster

Finding head start. $20^{mi}/\cancel{hr} * 3\cancel{hr} = 60 mi$

Dividing by relative rate

$50^{mi}/_{hr} - 20^{mi}/_{hr} = 30^{mi}/_{hr}$

$60/30 = \boxed{2 hr}$