Unit 0. Linear Equations + Proportions Control

1. C- multiplication $\frac{2x-4}{3} = 12(3)$

2. $3V = \frac{1}{3}bh$ $\frac{3V}{b} = \frac{bh}{b}$ $\boxed{h = \frac{3V}{b}}$ B.

3. No, the student needs to switch the inequality symbol after dividing by -5 on both sides. The answer should be $x \geq -12/5$

$$2(x-4) - 4x < -6x + 9x + 4$$
$$2x - 8 - 4x < -6x + 9x + 4$$
$$-2x - 8 < 3x + 4$$
$$-3x \qquad -3x$$
$$-5x - 8 < 4$$
$$+8 \qquad +8$$
$$\frac{-5x}{-5} < \frac{12}{-5}$$

$$\boxed{x > -\frac{12}{5}}$$

4. a. $\boxed{P = 6r - 20}$ (since this equation represents profit, you must subtract out how much he spent- expenses).

b. $P = 6(15) - 20$
$P = 90 - 20 = \boxed{\$70}$

5a. $P = \frac{F}{A}(A)$ $\frac{AP}{P} = \frac{F}{P}$ $\boxed{A = \frac{F}{P}}$

b. $A = \frac{8}{4}$ $\boxed{A = 2}$

6. Samantha solved the equation incorrectly She should have subtracted 11 on both sides instead of adding 11.

$6x + 11 + 3x = 47$

$9x + 11 = 47$

$-11 \quad -11$

$\frac{9x}{9} = \frac{36}{9}$ $\boxed{x = 4}$

7. Christy = $y = 7x + 50$

Stephanie = $y = 10x$

$10x = 7x + 50$ - use substitution

$-7x \quad -7x$

$\frac{3x}{3} = \frac{50}{3}$ $\boxed{x = 16.66 \text{ seconds}}$

8. $25 total to spend
Food = $12

$1.50x + 12 = 25$

$-12 \quad -12$

$\frac{1.50x}{1.5} = \frac{13}{1.5}$ $x = 8.6$

- She can buy 8 toys