PIPS
LITERAL EQUATIONS

1) Consider the literal equation $ax + b = c$

When solving, justify solution steps. Use as many lines as needed.

(a) Solve for b in terms of a , c and x

$ax + b = c$

(b) Solve for x in terms of a , b and c

$ax + b = c$

(c) Solve for a in terms of b , c and x

$ax + b = c$

2)

(a) Solve the literal equation $ax + ab = c$ for x.

$ax + ab = c$

(b) Show another way to solve $ax + ab = c$ for x. (Hint: "Undistribute" a).

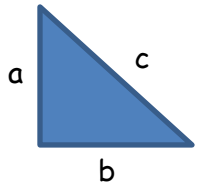
(c) Compare and contrast your results in parts (a) and (b).

3) (a) Amanda has a rectangular fish aquarium that holds 1,280 in^3 of water. The length of the aquarium is 16 inches and the height is 10 inches. What is the width of the aquarium? (Hint: $V = lwh$)

(b) Create a formula which could be used to find the width of ***any*** rectangular prism.

4) Consider the formula used to find the missing side of a right triangle (*The Pythagorean Theorem*).

$a^2 + b^2 = c^2$



Hint: The inverse operation of squaring (x^2) is taking the square root $\sqrt{\ }$.

(a) Solve the equation for **c**.

(b) Solve the equation for **b**.

5) (a) Sara is going to paint a circular piece of wood for the set of her school play. If the area of the wood is 36π, then what is the radius? (Hint: $A = \pi r^2$)

(b) Create a formula which could be used to find the radius of ***any*** circle.

6) How does the solution of a literal equation differ from the solution of a specific equation? (Hint: Think about $ax + b = c$ vs. $2x + 3 = 10$)