Kerry Ojakian's MTH 23.5 Class
Class Assignment #11.5

Solve the following equations for the indicated quantity.

1. Solve for y in the formula $2x + y = 7$

2. Solve for b in the formula $a + b = h^2$

3. Solve for L in $A = L \cdot W$ (i.e. Formula for Area of Rectangle). Then use that to do the following:

   (a) Find the length of a rectangle whose area is 8 and width is 2.

   (b) Find the length of a rectangle whose area is 20 and width is 4.

   (c) Find the length of a rectangle whose area is 10 and width is 4.

4. Solve for T in the formula $PV = nRT$

5. Solve for x in the formula $2x + 6y = 4$

6. Solve for x in the formula $-2x + 6y = 4$

7. Solve for r in the formula $C = 2\pi r$ (i.e. Formula for Circumference of a circle)

8. Solve for L in $P = 2L + 2W$ (i.e. Formula Perimeter of Rectangle). Then use that to do the following:

   (a) Find the length of a rectangle whose perimeter is 50 and width is 10.

   (b) Find the length of a rectangle whose perimeter is 100 and width is 40.

   (c) Find the length of a rectangle whose area is 35 and width is 10.

9. Solve for B in the formula $A = \dfrac{h(B + b)}{2}$

10. Solve for y in the formula $3x - 6y = 3$

11. Solve for $P(Y)$ in the formula $P(X \textit{ or } Y) = P(X) + P(Y)$.

12. Solve for $P(Y)$ in the formula $P(X \textit{ or } Y) = P(X) + P(Y) - P(X \textit{ and } Y)$.

13. Solve for $P(A \textit{ and } B)$ in the formula $P(A \textit{ or } B) = P(A) + P(B) - P(A \textit{ and } B)$.

14. Solve for $P(X \textit{ and } Y)$ in $P(X|Y) = \dfrac{P(X \textit{ and } Y)}{P(Y)}$

15. Solve for $P(Y)$ in $P(X|Y) = \dfrac{P(X \textit{ and } Y)}{P(Y)}$