

Homework #9 - One Step Equations Involving Addition and Subtraction**Solve the following equations. Show all work. Check the even numbered problems.**

1) $x + 7 = 17$ $\begin{array}{r} x + 7 = 17 \\ -7 \quad -7 \\ \hline x = 10 \end{array}$	2) $y - 21 = 30$ $\begin{array}{r} y - 21 = 30 \\ +21 \quad +21 \\ \hline y = 51 \end{array}$ $y - 21 = 30$ $51 - 21 = 30$ $30 = 30 \checkmark$
3) $a - 6 = -13$ $\begin{array}{r} a - 6 = -13 \\ +6 \quad +6 \\ \hline a = -7 \end{array}$	4) $z + 4 = -24$ $\begin{array}{r} z + 4 = -24 \\ -4 \quad -4 \\ \hline z = -28 \end{array}$ $-24 + (-4) = -28$ $z + 4 = -28$ $-28 + 4 = -24$ $-24 = -24 \checkmark$
5) $-6 + x = -15$ $\begin{array}{r} -6 + x = -15 \\ +6 \quad +6 \\ \hline x = -9 \end{array}$	6) $9 + b = 7$ $\begin{array}{r} 9 + b = 7 \\ -9 \quad -9 \\ \hline b = -2 \end{array}$ $9 + b = 7$ $9 + (-2) = 7$ $7 = 7 \checkmark$

7) Ally solved the equation $x - 12 = 10$ and said $x = -2$. Is Ally correct? If not, solve the equation to determine the correct solution.

No. She is not
Correct.

$$\begin{array}{r} x - 12 = 10 \\ +12 \quad +12 \\ \hline x = 22 \end{array}$$

8) A scuba diver was 30 feet below the surface of the ocean looking at some coral. He swam up a certain number of feet and then stopped at 13 feet below sea level to look at a school of fish swimming by. Write and solve an equation to determine how far up he swam from the coral to the school of fish. Be sure to include a let statement.

$$\begin{array}{r} -30 + x = -13 \\ +30 \quad +30 \\ \hline x = 17 \end{array}$$

Let $x =$ distance he swam up.

