Principles of Algebra   Name/Date___Clee / Today_____

ALL PROBLEMS CAN BE COMPLETED ON THIS WORKSHEET

WS 3B.2 – More Solving Multi-Step Equations

#1-7, Solve each equation.

1. $(2y + 5) - (y + 3) + (3 - 7y) = 23$

$2y + 5 - y - 3 + 3 - 7y = 23$

$-6y + 5 = 23$

$-6y = 18$

$\boxed{y = -3}$

2. $(x + 7) + (x - 3) + (2x + 11) = 45$

$x + 7 + x - 3 + 2x + 11 = 45$

$4x + 15 = 45$

$4x = 30$

$x = \frac{30}{4}$

$\boxed{x = \frac{15}{2}}$

3. $-5 = -5(z - 7) + 5$

$-5 = -5z + 35 + 5$

$-5 = -5z + 40$

$-45 = -5z$

$9 = z \longrightarrow \boxed{z = 9}$

4. $-2.5 = 5a - a - (a - 2)$

$-2.5 = 5a - a - a + 2$

$-2.5 = 3a + 2$

$-4.5 = 3a$

$-1.5 = a \longrightarrow \boxed{a = -1.5}$

5. $0.02 - 0.05x - 0.3x = -0.68$

$0.02 - 0.35x = -0.68$

$-0.35x = -0.7$

$\boxed{x = 2}$

6. $\frac{1}{5}f - 6 + 11 = 1$

$\frac{1}{5}f + 5 = 1$

$\frac{1}{5}f = -4$

$\boxed{f = -20}$

7. $4(2k - 7) + 3(k - 1) = 46$

$8k - 28 + 3k - 3 = 46$

$11k - 31 = 46$

$11k = 77$

$\boxed{k = 7}$

8. Five times a number subtracted from three times the number is twenty. Find the number.

let $n =$ the number

$3n - 5n = 20$

$-2n = 20$

$n = -10$

$\boxed{\text{The number is } -10.}$