Algebra 1
HW09 Two-Step Equations

Define the following.

1) Equation

2) Solution

3) What is the order of operations for solving an equation?

Solve each equation. Simplify and rationalize fractions and radicals as necessary.

4) $-1 = \dfrac{n}{7} - 3$

5) $69 = 6n - 3$

6) $2 = \dfrac{v-4}{3}$

7) $\dfrac{x}{7} + 8 = 5$

8) $\dfrac{x}{7} - 23 = -26$

9) $4 = \dfrac{-29+b}{-3}$

10) $\dfrac{424}{135} = \dfrac{7}{9}x - \dfrac{4}{5}$

11) $\dfrac{413}{100} = \dfrac{3}{10}v + \dfrac{15}{4}$

12) $-9.8 + \dfrac{b}{2} = -11.05$

13) $\dfrac{6.91+v}{-7} = 0.97$

14) $3x + \sqrt{7} = 2\sqrt{7}$

15) $x\sqrt{2} - 5 = 21$

16) $-8(8 + 5n) = -384$

17) $120 = -6(4 + 3x)$

18) $-2\sqrt{6}(x\sqrt{6} + 3) = 78\sqrt{6}$

19) $3(2x - \sqrt{7}) = 24$

20) Adam had some candy to give to his three children. He first took four pieces for himself and then evenly divided the rest among his children. Each child received four pieces. With how many pieces did he start?

21) You bought a magazine for $4 and some notepads for $2 each. You spent a total of $12. How many notepads did you buy?

22) Ndiba won 47 pieces of gum playing horseshoes at the county fair. At school he gave three to every student in his math class. He only has 2 remaining. How many students are in his class?

23) Heather's Bikes rents bikes for $17.40 plus $3.90 per hour. Julio paid $29.10 to rent a bike. For how many hours did he rent the bike?

24) You bought a magazine for $4.71 and some notepads for $3.92 each. You spent a total of $32.15. How many notepads did you buy?

25) Amy sold half of her comic books and then bought thirteen more. She now has 32. With how many did she begin?