Math 8 Algebra: Solving Equations

Name: _key_

Answer the following questions in the space provided. **You must show all your work to receive full marks.** You will not receive full marks for writing the answers only.

1) $4x + 12 = 36$

$4x = 24$

$x = 6$

2) $0.08x - 16 = 40$

$.08x = 56$

$x = 700$

3) $\dfrac{x}{7} + 13 = 15$

$\dfrac{x}{7} = 2$

$x = 14$

4) $\dfrac{2}{3} + x = \dfrac{3}{4}$

$x = \dfrac{3}{4} - \dfrac{2}{3}$

$= \dfrac{9}{12} - \dfrac{8}{12}$

$= -\dfrac{1}{12}$ or 0.083

5) $-14 = 2a$

$\dfrac{-14}{2} = \dfrac{2}{2}$

$a = -7$

6) $10y - 6.5 = 33.5$

$10y = 40$

$y = 4$

7) $-x = 7$

$x = -7$

8) $3x - 4 = 11$

$3x = 15$

$x = 5$

9) $12x - 27 = 41.4$

$12x = 68.4$

$x = 5.7$

10) $\dfrac{1}{4}x - \dfrac{1}{2} = 12$

$\dfrac{1}{4}x = \dfrac{12}{1} + \dfrac{1}{2}$

$\dfrac{1}{4}x = \dfrac{25}{2}$

$x = 25(4)$