Solving Equations Assignment

Name:

Solve each of the following equations, being sure to neatly show all steps.

1) $2x + 3 = 17$

$2x = 14$

$x = 7$

2) $3(5 - 2x) - 8 = 4x$

$15 - 6x - 8 = 4x$

$7 = 10x$

$\frac{7}{10} = x$

3) $0.6x - 0.01 = 0.2x + 0.29$

$60x - 1 = 20x + 29$

$40x = 30$

$x = \frac{3}{4}$

4) $-3y - 7 = y + 13$

$-20 = 4y$

$-5 = y$

5) $-\frac{3}{4}x - 6 + 12 = 0$

$6 = \frac{3}{4}x$

$24 = 3x$

$8 = x$

6) $5x + 9 + 3x - x + 4 = 4x - 5$

$7x + 13 = 4x - 5$

$3x = -18$

$x = -6$

7) $\frac{x}{4} - \frac{x}{5} = 5$

$\times 20$

$5x - 4x = 100$

$x = 100$

8) $\frac{1}{2}(x-1) - \frac{2}{3}(x+1) = 1$

$\times 6$

$3(x-1) - 4(x+1) = 6$

$3x - 3 - 4x - 4 = 6$

$-x - 7 = 6$

$-x = 13$

$x = -13$

9) $4.9(z + 6.1) = -3.2z - 7.37$

$490(z+6.1) = -320z - 737$

$490z + 2989 = -320z - 737$

$810z = -3726$

$z = \frac{-3726}{810} = \frac{-1863}{405} = \frac{-621}{135} = \frac{-207}{45}$

$= \frac{-69}{15} = \frac{-23}{5}$

I'm sorry, that was awful!

10) $0.12(2x - 5) - \frac{2}{3}(x + 1) = 0$

$0.36(2x-5) - 2(x+1) = 0$

$36(2x-5) - 200(x+1) = 0$

$72x - 180 - 200x - 200 = 0$

$-128x = 380$

$x = -\frac{380}{128} = \frac{-190}{64} = \frac{-95}{32}$

that one too !!

Learning Goal:

I can solve linear equations, including rational coefficients and the distributive property.

	Partly Meeting Expectations	**Fully Meeting Expectations**	**Exceeding Expectations**
Accuracy	Frequent minor errors and/or some major ones.	Occasional minor errors may exist.	Very few or no mistakes of any kind.
Communication	Communication is understandable & thinking is mostly shown.	Work is organized and understandable. Thinking is shown clearly in the work.	Work shows consistent and effective organization and clarity.
Understanding	Basic ideas are understood.	Basic ideas are fully understood.	Concepts clearly understood and applied to advanced problems.