Algebra 1 - Solving Equations

Solve each of the following:

Answers indicated by [ ]

1. $4x - 2(2 - x) = 2(3x - 2)$ *[All Real Numbers]*

2. $\frac{2x+5}{3} + 8 = x - 1$ $[\, x = 32 \,]$

3. $\frac{2}{3}(x - 6) = 2x - \frac{4}{3}(x + 1)$ *[No Solution]*

4. $4x - (10 - x) = \frac{15}{2}$ $[\, x = \frac{7}{2} \,]$

5. $6 + \frac{1}{3}(x - 9) = \frac{1}{2}(2 - x)$ $[\, x = -\frac{12}{5} \,]$

6. $3x - 0.4(5 - 2x) = 5.6$ $[\, x = 2 \,]$

7. $|3x - 5| + 2x = 5 - x$ $\quad [\, x \leq \frac{5}{3} \,]$

8. $2^3 + \frac{2x+2}{2} = 3x + 3$ $\quad [\, x = 3 \,]$

9. $3(2x + 1) - 4 = 2(3x + 2) - 5$ $\quad [\, No\ Solution \,]$

10. $4x - 3(x + 2) = 2x + 5 - 3x$ $\quad [\, x = \frac{11}{2} \,]$

11. $2(x - 7) + 3 = 2x + 9$ $\quad [\, No\ Solution \,]$

12. $4 - 5(x - 3) + 2x = -2$ $\quad [\, x = 7 \,]$

13. $2(x - 1) + 4 = 3(x + 2) - x$ [*No Solution*]

14. $\dfrac{2x+3}{4} = \dfrac{3x-1}{2}$ [$x = \dfrac{5}{4}$]

15. $3(2x - 1) - 4(x + 2) = 5x + 6$ [$x = \dfrac{-17}{3}$]