Algebra 1 Name_____

Week Twenty-Nine Homework

Date_____ Period____

Solve each complex equation using its unique strategy and opposite operations.

1) $9.8(4x - 3.5) + 12.13 = 102.06$

2) $44.28(4.4x - 11.05) = -269.83$

3) $\frac{2}{10.1} = \frac{x + 6.15}{5x + 2}$

4) $\frac{4.91}{7x + 1.2} = \frac{18.38}{x - 9.4}$

5) $8.36x + \sqrt{331} = \frac{413}{9} + 7.4^2 + |40.34|$

6) $3.18^3 + |-138.54| = \sqrt{991.5} + \frac{x}{3}$

7) $7.3\sqrt{3x + 3.9} - 21.4 = 48.26$

8) $6.5\sqrt{\frac{2x - 7}{6}} - 9.3 = 31.06$

9) $3.4*3.1^x + 322.56 = 3340.07$

10) $-26.84*2.5^x - 26.32 = -1074.76$

Solve each two-solution equation using its unique strategy.

11) $2x^2 - 4x - 131 = -35$

12) $3x^2 + 6x - 123 = 21$

13) $6.25\left|\frac{9x - 4}{3}\right| - 8.98 = 83.16$

14) $10.7\left|\frac{6.5x - 4}{5}\right| + 7.13 = 97.44$

15) Bekah can usually jog 1.5 miles in fourteen minutes. At that pace how long will it take her to jog the West Salem fun-run?

16) Kyler's truck drove 109 miles on three gallons of gas. How far could he drive on a full 16.5 gallon tank?

Factor each completely using a box and a diamond.

17) $7x^2 + 6x - 1$

18) $5x^2 + 43x + 24$

19) $7x^2 + 16x + 9$

20) $3x^2 - 17x + 10$

21) $7x^2 - 55x - 8$

22) $2x^2 + 23x + 56$

23) $7x^2 - 16x + 4$

24) $2x^2 - 17x + 21$

25) $2x^2 + 17x - 30$

26) $7x^2 + 13x - 24$

27) $5x^2 + 11x - 12$

28) $3x^2 - 4x - 20$