Algebra Review - Key

In problems 1-3, solve each equation using the quadratic formula

1. $x = \dfrac{3 \pm \sqrt{17}}{8}$	2. $x = -1 \pm 2i\sqrt{2}$
3. $x = \dfrac{1}{8}, -1$	

In problems 4-20, factor

4. $8(x^2 + 4x - 2)$	5. $3x^2\left(x^3 - 3x + 3\right)$
6. $-5x^2\left(2x^5 - 5\right)$	7. $(x + 6)(x - 8)$
8. $(x - 30)(x - 4)$	9. $(x - 10)(x + 4)$
10. $(x + 10)(x + 8)$	11. $(7x - 1)(x - 3)$
12. $(8x + 3)(2x - 1)$	13. $(10x - 1)(6x - 1)$
14. $(5x + 3)(x + 2)$	15. $(2a - b)(x + 3)$
16. $(9x - 1)(4x - 3)$	17. $(10x + 7)(10x - 7)$
18. $(3x + 1)(3x - 1)$	19. $(2x + 3)(4x^2 - 6x + 9)$
20. $(3x - 4)(9x^2 + 12x + 16)$	

In problems 21-23, solve each equation using the zero factor property

21. $x = 0, x = 3$	22. $x = 7, x = 11$
23. $x = \dfrac{1}{5}, x = -4$	

In problems 24-26, solve each equation using the square root property

24. $x = \pm 2\sqrt{10}$	25. $x = 5 \pm 3i\sqrt{2}$
26. $x = \dfrac{-3}{5}, x = 1$	

In problems 27-28, solve each equation using the power principle

27. $x = 0$	28. $x = 28, x = -26$

In problems 29-30, solve each equation using the INTERSECT feature of the TI-83/84 (if the answer will not change to a fraction, round to two decimal places)

29. $x = 2, x = 5, x = \dfrac{-1}{7}$	30. $x = -6.02, x = 0.2, x = 0.82$