Honors Algebra II Answers to Study Guide Unit 3

1. $(2a+1)(4a^2-2a+1)$
2. $(a^2+3b^2)(a+3b)(a-3b)$
3. $2x(3x+4)(3x-4)$
4. $(x^2+3)(x+2)$
5. $(x^2-2)(x+2)(x-2)$
6. 7
7. 4
8. 3
9. Pos: 2 or 0 Neg: 3 or 1
10. Pos: 1 Neg: 3 or 1
11. Pos: 1 Neg: 2 or 0
12. $\pm 1, \pm 3, \pm 9, \pm \frac{1}{5}, \pm \frac{3}{5}, \pm \frac{9}{5}$
13. $\pm 1, \pm 2, \pm 3, \pm 4, \pm 6, \pm 12$
14. $x = -3\ (mult\ of\ 2)$
15. $x = 2, \pm 3i$
16. $x = 2, \pm 4i$
17. $x = 0, 2, \frac{1}{3}$
18. $x^4 - 21x^2 + 20x = 0$
19. $x^3 - 2x^2 + 4x - 8 = 0$
20. $As\ x \to -\infty, y \to +\infty$ and $As\ x \to +\infty, y \to +\infty$
21. $As\ x \to -\infty, y \to +\infty$ and $As\ x \to +\infty, y \to -\infty$
22. Even degree, positive leading coefficient
23. Odd degree, positive leading coefficient
24. $x = 2$ has a multiplicity
25. $a\ (x-3)$