

Answer Key

Testname: PC PRACTICE PROBLEMS 3.4-3.6

- 1) $(-\infty, -3)$ or $(-1, \infty)$
- 2) $(-\infty, -7)$ or $(7, \infty)$
- 3) $(-2, 0)$ or $(6, \infty)$
- 4) $(-\infty, -5]$ or $(0, 5]$
- 5) $(-\infty, 0)$ or $(4, 5)$
- 6) $(-\infty, -6)$ or $(6, \infty)$
- 7) $\{x \mid 15 \leq x \leq 25\}$
- 8) $(-3, 0), (3, 0)$
- 9) $\left(0, \frac{4}{1331}\right)$
- 10) vertical asymptote: $x = 7$; hole at $\left(-6, \frac{11}{13}\right)$
- 11) 3.6 quarts
- 12) 3 feet per second
- 13) $S(x) = 2x^2 + \frac{32,000}{x}$
- 14) $\pm \frac{1}{6}, \pm \frac{1}{3}, \pm \frac{2}{3}, \pm 1, \pm 2$
- 15) Yes; $f(x) = (x + 2)(6x^2 + 3x + 4)$
- 16) $-4, 4$; $f(x) = (x - 4)(x + 4)(x^2 + 1)$
- 17) 4, multiplicity 2; $f(x) = (x - 4)^2(3x^2 + 1)$
- 18) $\left\{\frac{1}{2}\right\}$