



Advanced Math

pg 201 57-70, pg 204 13-20 all

- 57) a) 16 Ft/sec
 b) 1.5 sec
 c) -16 Ft/sec

- 58) a) $A = x(12-x)$
 b) Domain $(0, 12)$
 c) $6 \times 6 \rightarrow$ square

59) -7

60) 5

61) 23

62) $\sqrt{7}$

63) $F^{-1}(x) = 2(x+3)$

64) $F^{-1}(x) = \frac{x+2}{5}$

65) $F^{-1}(x) = x^2 - 1$, domain $[0, \infty)$

66) $F^{-1}(x) = \sqrt[3]{x-2}$

67) $F = \frac{1}{3}x\sqrt{y}$

68) $R = \frac{1024}{x^3}$

69) $z = \frac{32x^2}{25y}$ or $z = \frac{1.28x^2}{y}$

70) $w = \frac{8x}{2^3}$

- 13) even
 increasing $(-2, 0)$ $(2, 6)$
 decreasing $(-\infty, -2)$ $(0, 2)$

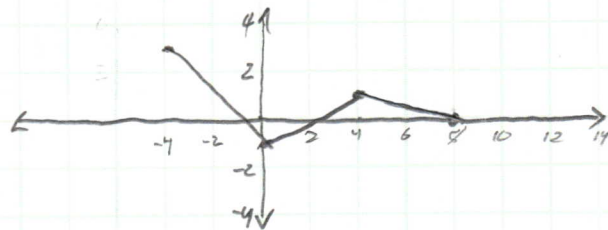
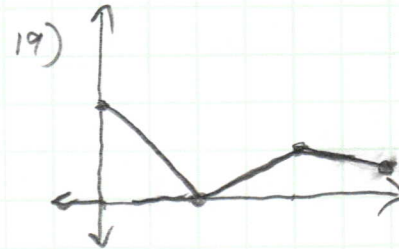
- 14) odd
 increasing $(-2, 2)$
 decreasing $(-\infty, -2)$ $(2, \infty)$

15) $F(x) - g(x) = x^2 - \sqrt{2-x}$, $(-\infty, 2]$

16) $\frac{F(x)}{g(x)} = \frac{x^2}{\sqrt{2-x}}$, $(-\infty, 2)$

17) $F(g(x)) = 2-x$, $(-\infty, 2]$

18) $g^{-1}(x) = 2-x^2$ $[0, \infty)$



20) $d = ks^2$ $35 = k(70)^2$
 $\frac{35}{4900} = k = .0071428571$
 $d = .0071428571 s^2$
 $d = .0071428571 (100)^2$
 $d = 71.43 \text{ m}$