#12 ANSWERS TO PRACTICE TEST 1 (1.1 – 2.3)

1(a) $y = -2 \cdot \sqrt{3}^{x}$

1(b) $y = 3\cos(2x) - 1$

2. $k = \dfrac{\ln(2.4)}{30} \approx 2.9\%$

3(a) x = c

3(b) none

3(c) x = a, x = –a

3(d) $y = 3a^2/c$

3(e) is not; There is an asymptote at x = c.

4(a) 0 meters; Initial height occurs when t = 0.

4(b) $t = \dfrac{v_0}{0.5g} = \dfrac{2v_0}{g}$

4(c) $t = \dfrac{v_0}{g}$; $\dfrac{v_0}{g}$ is halfway in time to $\dfrac{v_0}{0.5g}$.

5. $y = \dfrac{4}{3 \cdot \ln x} + \dfrac{2}{3} = \dfrac{4 + 2 \cdot \ln x}{3 \cdot \ln x}$

6. $x = \dfrac{1}{1 - \log 3}$

7(a) DNE

7(b) –2

8(a) 0.086858

8(b) 3/32

9. Sketch the graph.