

AP CALCULUS PROBLEM SET 0 ANSWER KEY

1.  $\frac{48}{5}$

2. a)  $f(x) = f(-x)$ , even symmetry

b)  $x < -3, x > 3$

c)  $x = \pm\sqrt{10}$

d)  $f^{-1}(x) = \sqrt{e^x + 9}$

3.  $f(x) = 2(x - 1)(x + 3)^2$

4. a) (5.367, 19.266) and (18.633, 7.266)

b) 0.808 h or 48.5 min

5.  $x = \frac{1}{4}, 16$

6. a)  $\cos x > 0$

$$0 < x < \frac{\pi}{2}, \frac{3\pi}{2} < x < 2\pi$$

b)  $y \leq 0$

c)  $x = 0, 2\pi$

7.  $\theta = \frac{\pi}{6}, \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6}$

8.  $x = -3, \frac{3 \pm \sqrt{5}}{2}$

9.  $y = -\frac{1}{2}x + \frac{11}{2}, y = \frac{1}{2}x + \frac{1}{2}$