

Chapter 8

1. Graph each. Show asymptotes.
- a) $y = 3(2)^x - 2$ b) $y = \left(\frac{1}{3}\right)^{x+1}$
- c) $y = 2e^{-x} + 3$ d) $y = \frac{1}{2}e^x$ e) $y = \log_2 x + 1$

Chapter 10

2. Graph: $\frac{-1}{8}(x-4)^2 = y+7$. Locate focus and directrix.
3. Identify the conic, rewrite in standard form, and graph. Locate center, vertices, foci, and asymptotes where appropriate.

a) $9x^2 + 25y^2 + 36x - 150y + 36 = 0$

b) $y^2 - 3x^2 - 6x - 4y - 8 = 0$

c) $y^2 - 4y - 2x + 2 = 0$

d) $x^2 + y^2 - 12x + 4y + 31 = 0$

Chapter 14

4. Graph one period of each.
- a) $y = -2 \tan \frac{1}{3}x$ b) $y = -3 + 2 \cos(x - \pi)$.
- c) $y = 5 + \frac{1}{2} \sin 2\pi x$. d) $y = 4 \sec \frac{1}{3}x$