Precalc   Names_____   Date_____

3.1, 3.2 Graphing Exponential Function Review: *No calculators!!!*

Put the equation in standard form (coefficient of "x" is 1), fill in cues and graph the function.
Plot and label y-intercept, the CP' and graph the HA (dotted line)

1. $y = 2^x + 1$ y = _____
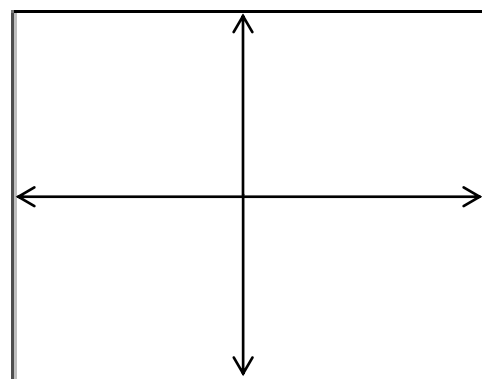
   a. BS

   b. Refl

   c. HA _____   f. CP' _____

   d. CP _____   g. y-int _____

   e. TR _____   h. AP _____

2. $y = 3^{x-2}$ y = _____

   a. BS
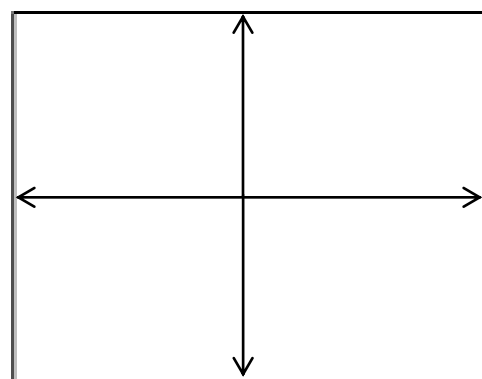
   b. Refl

   c. HA _____   f. CP' _____

   d. CP _____   g. y-int _____

   e. TR _____   h. AP _____

$$e^2 = 7.4 \qquad \frac{1}{e} = 0.4$$

$$e^3 = 20.1 \qquad \left(\frac{1}{e}\right)^2 = 0.14$$

$$e^4 = 54.6 \qquad \left(\frac{1}{e}\right)^3 = 0.05$$

3. $y = -3 * 2^x$ y = _____
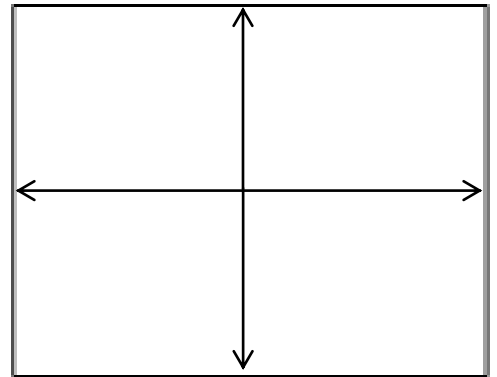
    a. BS

    b. Refl

    c. HA _____   f. CP' _____

    d. CP _____   g. y-int _____

    e. TR _____   h. AP _____

4. $y = 3^{-x+2}$ y = _____

    a. BS

    b. Refl

    c. HA _____   f. CP' _____

    d. CP _____   g. y-int _____

    e. TR _____   h. AP _____
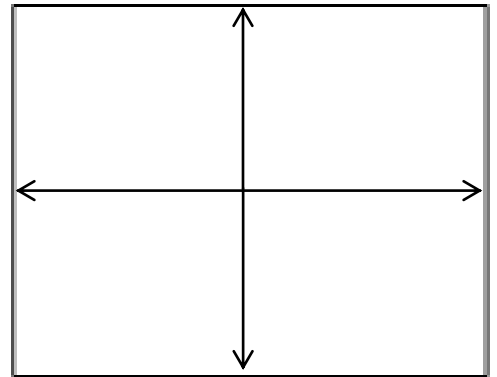
5. $y = -2^{-x+3} + 1$ y = _____

    a. BS

    b. Refl

    c. HA _____   f. CP' _____

    d. CP _____   g. Y-int _____

    e. TR _____   h. AP _____
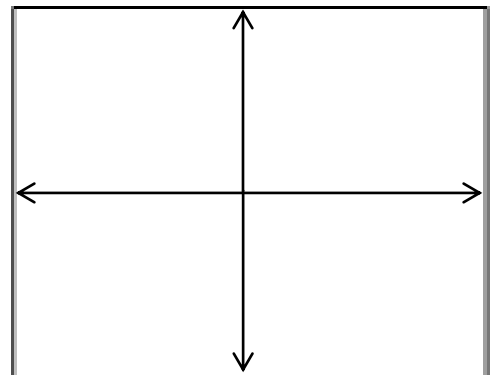
6. $y = e^{x+1} - 3$ y = _____

     a. BS

     b. Refl

     c. HA _____   f. CP' _____

     d. CP _____   g. Y-int _____

     e. TR _____   h. AP _____
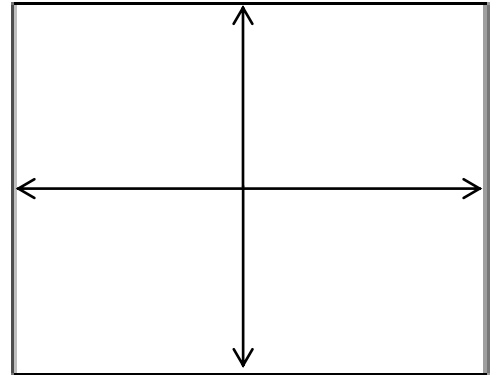
7. $y = 4 * e^{-x+1} - 2$ y = _____

     a. BS

     b. Refl

     c. HA _____   f. CP' _____

     d. CP _____   g. Y-int _____

     e. TR _____   h. AP _____
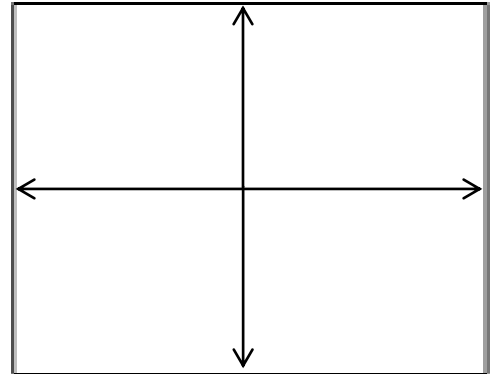
8. $y = -2 * 27^{(-\frac{2}{3}x + \frac{2}{3})} - 1$ y = _____
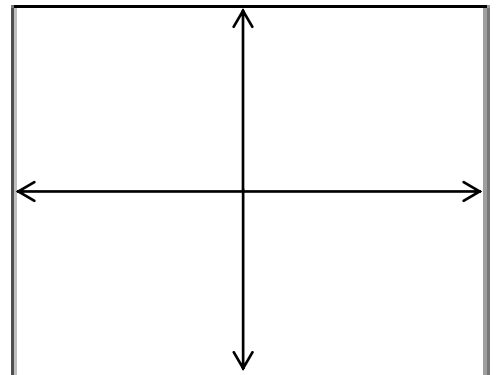
     a. BS

     b. Refl

     c. HA _____   f. CP' _____

     d. CP _____   g. Y-int _____

     e. TR _____   h. AP _____

9. Match the graphs on the right with the following equations : Point CP' is shown

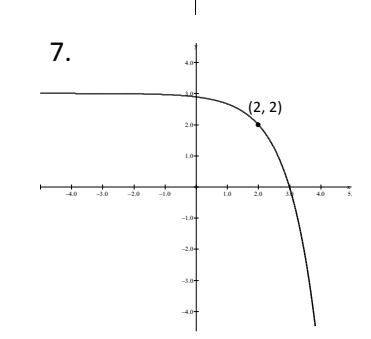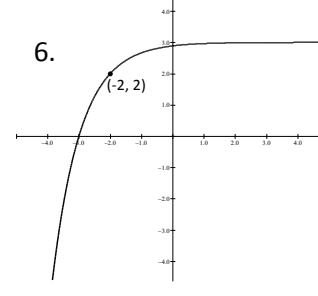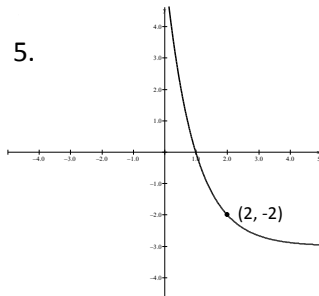a. _____ $y = -3^{(-x-2)} + 3$

b. _____ $y = -3^{(-2-x)} - 3$
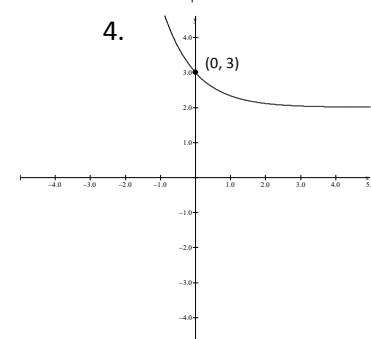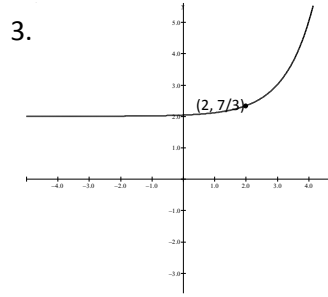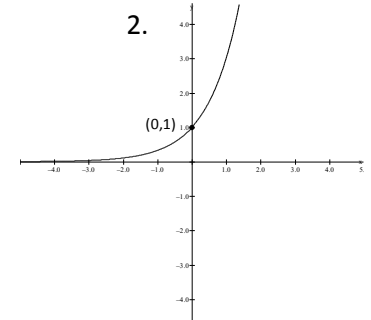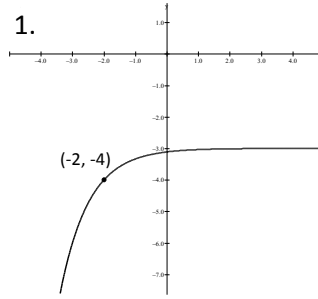
c. _____ $y = \left(\frac{1}{3}\right)3^{(x-2)} + 2$

d. _____ $y = 3^x$

e. _____ $y = 3^{(2-x)} - 3$

f. _____ $y = 3^{-x} + 2$

g. _____ $y = -3^{(x-2)} + 3$
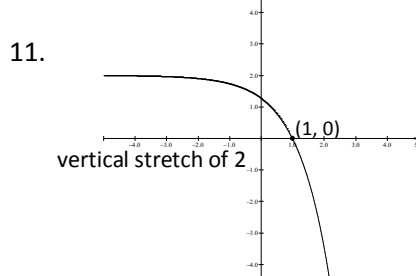
1.

(-2, -4)

2.

(0,1)

3.

(2, 7/3)

4.

(0, 3)

5.

(2, -2)

6.

(-2, 2)

7.

(2, 2)

Give the equation for the following graphs. Assume the base is "e" and the vertical compression or stretch ("c") is 1 or -1 unless otherwise noted. Point CP' is shown.

10.

(-2, -2)

_____

11.

(1, 0)
vertical stretch of 2

_____