

AA2 Practice Problems

Name: _____

1. For each of the following equations, state the parent equation and then sketch its graph. Include the locator point and axes intercept(s), if any.

a) $y = \frac{1}{4} \cdot 2^x - 1$

b) $y = -\frac{1}{3}(x+4)^2 + 7$

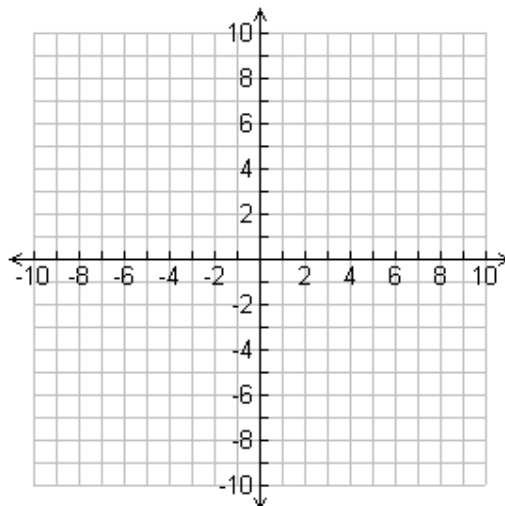
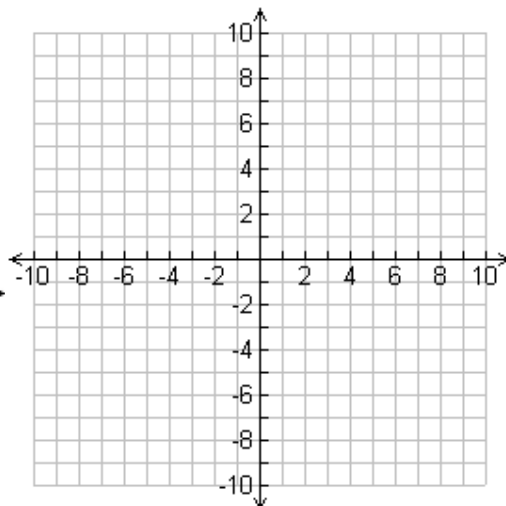
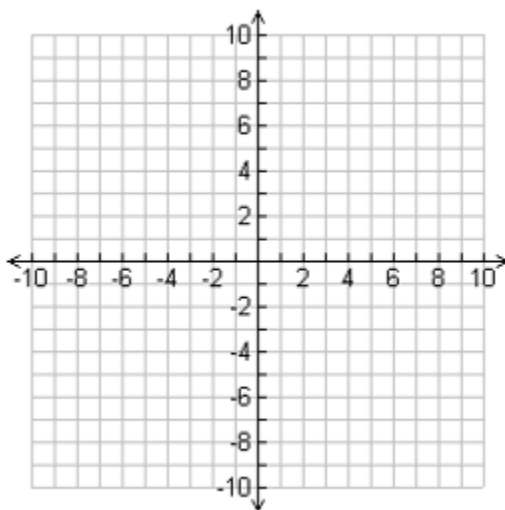
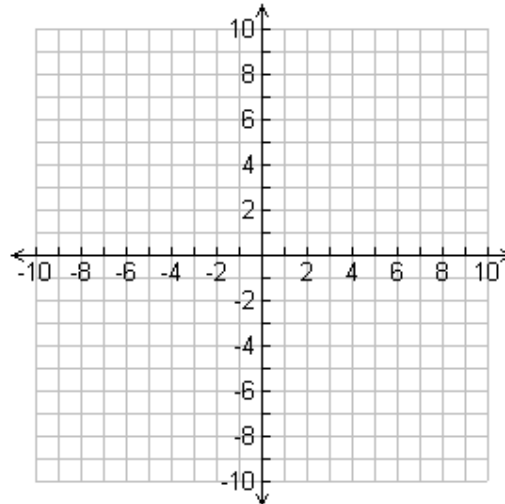
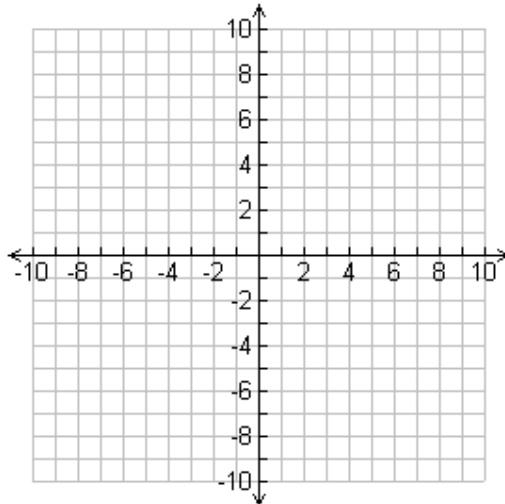
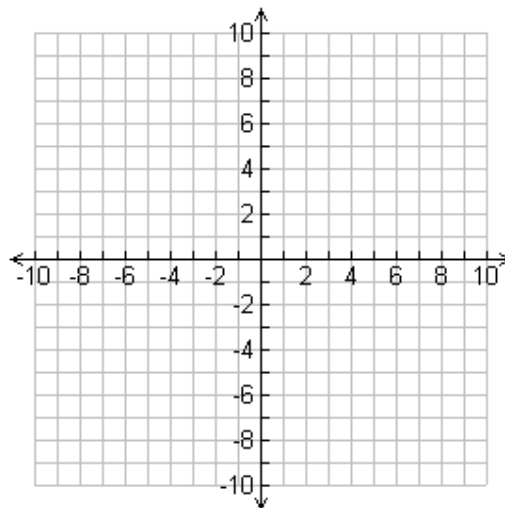
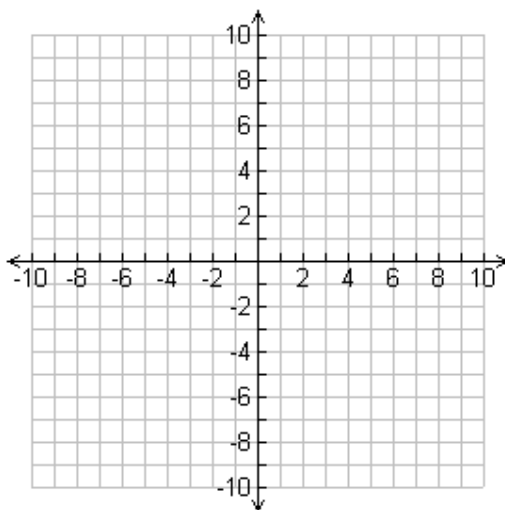
c) $y = 3|x-5|$

d) $y = \frac{1}{x+1} - 5$

e) $y = -(x-2)^3 + 1$

f) $y = 2(x-1) + 3$

g) $y = -3\sqrt{x+2} + 5$



Problems: Converting

1. Change each function into the form specified. Check all your answers on Desmos by graphing both forms.

a. $f(x) = x^2 - 4x - 96$ into factored form.

b. $f(x) = 4x^2 - 4x - 3$ into factored form.

c. $f(x) = 3(x - 4)(x + 2)$ into standard form.

Hint: First do $(x - 4)(x + 2)$ then use the 3.

d. $f(x) = -2(x + 5)^2 + 6$ into standard form.

Hint: First do $(x + 5)^2$, then use the -2 , then the 6.

e. $f(x) = 2x^2 + 16x + 28$ into vertex form.

f. $f(x) = (x + 3)(x - 5)$ into vertex form.

g. $f(x) = (x - 1)^2 - 1$ into factored form.

Hint: Distribute, then simplify, then factor.

h. $f(x) = 3(x - 4)(x + 2)$ into vertex form.