

MAC1105 College Algebra
3.4 Practice Problems

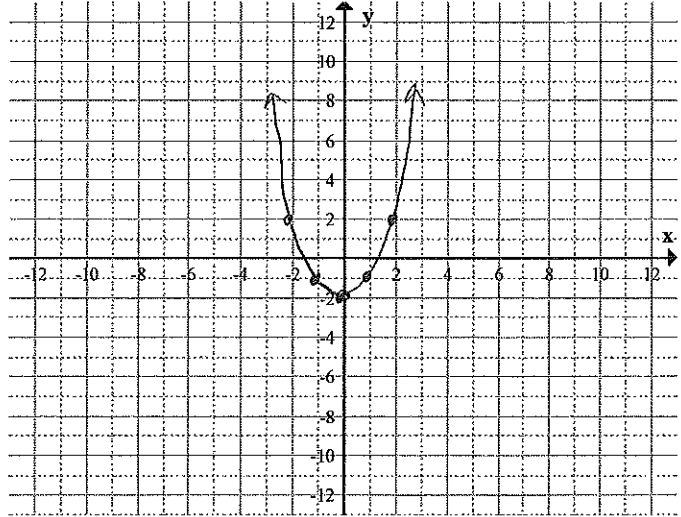
Graph the following functions using the idea of transformations. List the type of transformations that you used.

1) $f(x) = x^2 - 2$

Base Function: $y = x^2$

List Transformations:

vertical shift down 2 units



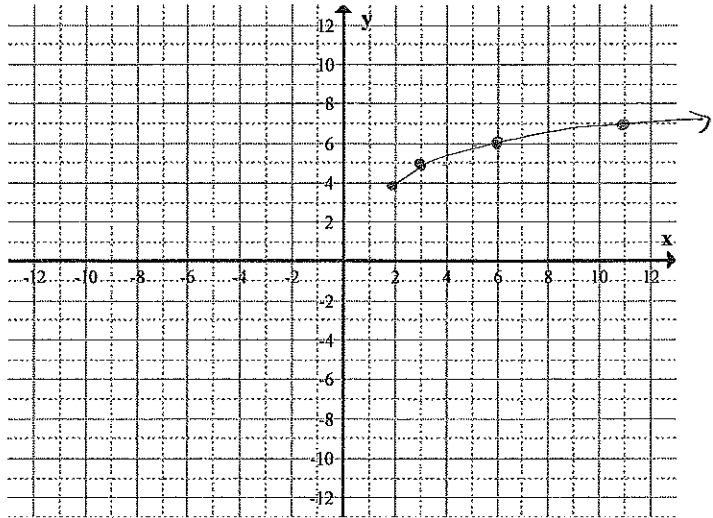
2) $g(x) = \sqrt{x-2} + 4$

Base Function: $y = \sqrt{x}$

List Transformations:

horizontal shift right 2 units

vertical shift up 4 units



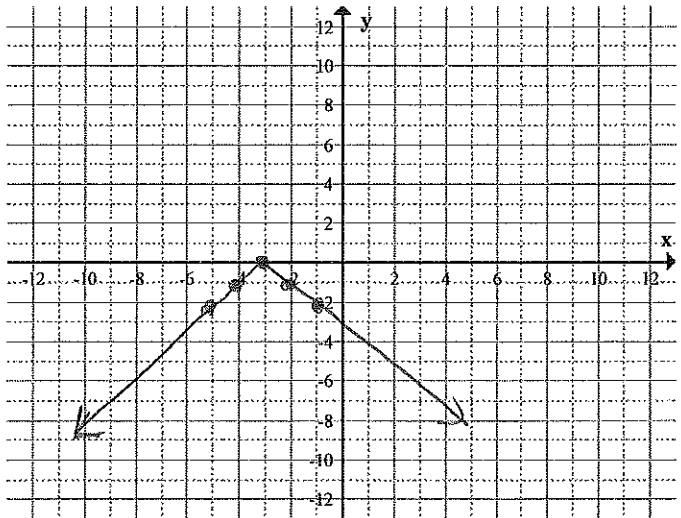
3) $h(x) = -|x+3|$

Base Function: $y = |x|$

List Transformations:

horizontal shift left 3 units

vertical reflection over x-axis

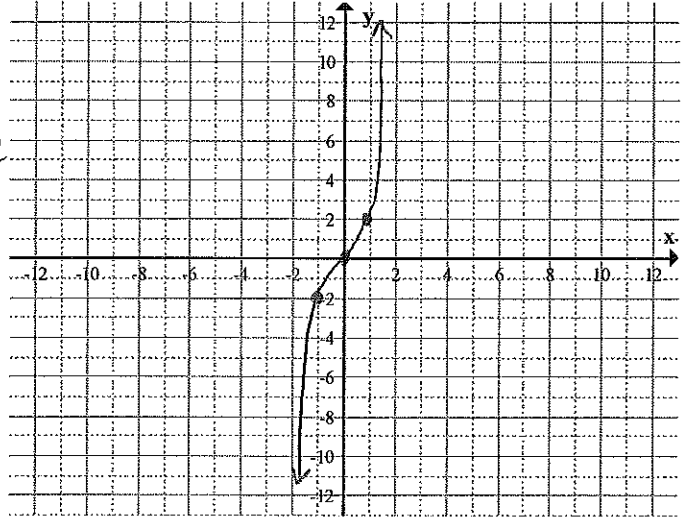


4) $f(x) = 2x^3$

Base Function: $y = x^3$

List Transformations:

vertical stretch by a factor of 2



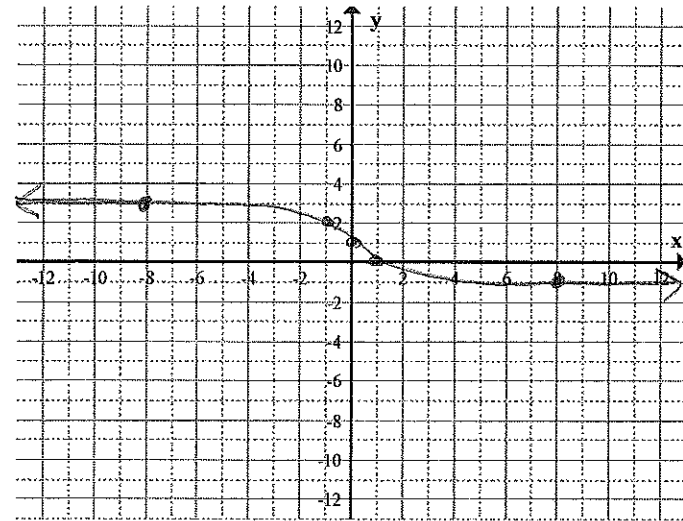
5) $f(x) = -\sqrt[3]{x+1}$

Base Function: $y = \sqrt[3]{x}$

List Transformations:

vertical reflection over the x-axis

vertical shift up 1 unit



6) $f(x) = \frac{1}{x+2} - 1$

Base Function: $y = \frac{1}{x}$

List Transformations:

horizontal shift left 2 units

vertical shift down 1 unit

