

Name: _____ Intro to Functions Review

1.) Graph the following function: $y = \sqrt[3]{192 - 64x} - 2$.

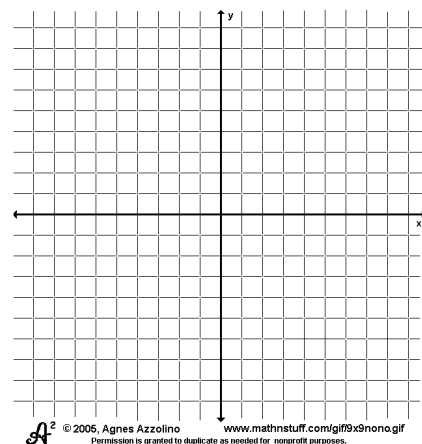
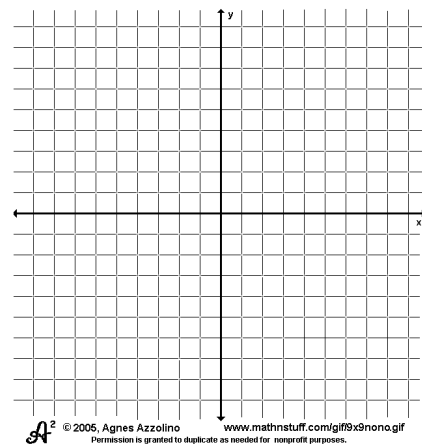
State what translations and transformations happening compared to the parent function.

Domain: _____ Range: _____

2.) Graph the following function: $2y - 3 = \sqrt{8 - 4x} + 7$.

State what translations and transformations happening compared to the parent function.

Domain: _____ Range: _____



3.) The population of an Island can be calculated by the function $P(t) = 3.32t^{\frac{5}{3}}$ according to a recent survey. P represents the population (measured by millions) and t the time (measured by years). After how many years, will the population reach 45.34 million. Round your answer to one decimal point.

4.) Simplify in all 3 forms $\frac{(5x^2yz^{-3})^{-\frac{1}{6}}}{\sqrt[4]{25x^4y^2z^{-6}}}$

Name: _____ Intro to Functions Review

5.) Solve: $\sqrt{3m + 4} + 1 = \sqrt{6 - 2m}$

6.) Simplify: $(2x + 5)^{\frac{1}{4}} - (3x - 1)^{\frac{1}{8}} = 0$

7.) Simplify in all 3 forms. $(\frac{162}{1250}a^{-6}b^5c^8)^{-\frac{3}{4}}$

8.) Solve for y: $6 - 3|5 - 7y| = 1$

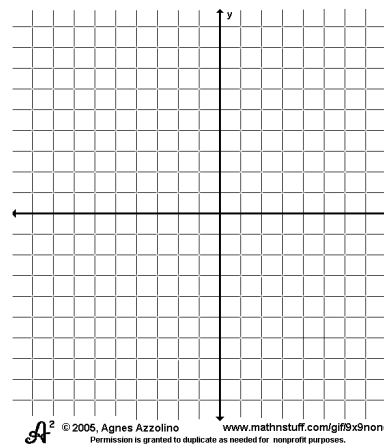
9.) $4 - 2|4x - 1| = -4x + 5$

10.) Graph the following piecewise function:

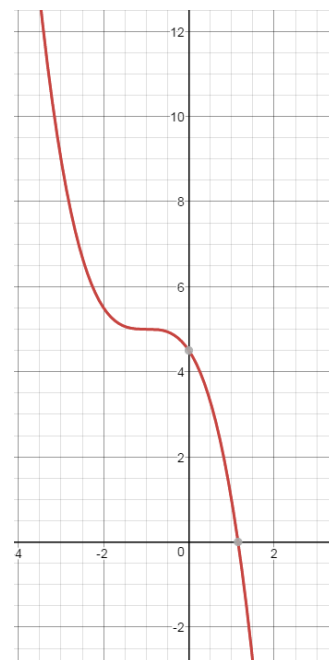
$$x^2 + 8x + 12 \text{ when } -6 \leq x < 0$$

$$f(x) = \frac{1}{4}|8 - 4x| + 1 \text{ when } 0 \leq x \leq 3$$

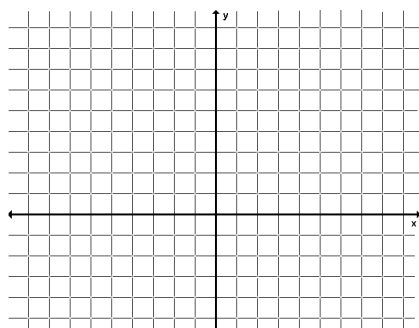
$$-\frac{1}{3}(x - 4)^3 - 5 \text{ when } x > 4$$



11.) Write the equation for the function graphed.



12.) Graph $f(x) = 2[x - 3] + 4$



Name: _____ Intro to Functions Review

13.) Perform the indicated operation of function: where $f(x) = 3x^2 - 6x + 1$ & $g(x) = 2x - 5$?

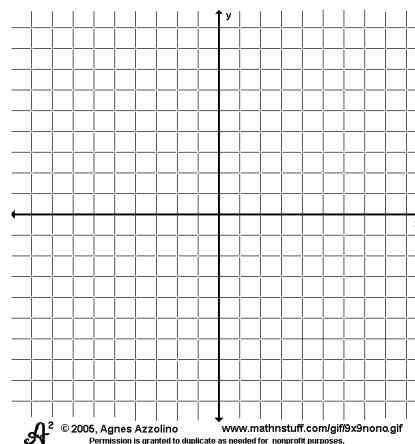
a.) $3(g \circ f)(-2)$

b.) $f(g(3))$

c.) $g(f(g(x)))$

14.) Solve for x . Find the exact Solution: $\sqrt{3x + 7} + \sqrt{5x + 1} = 3$

15.) Graph the following function: $y = -\frac{1}{3}(x - 2)^3 + 1$

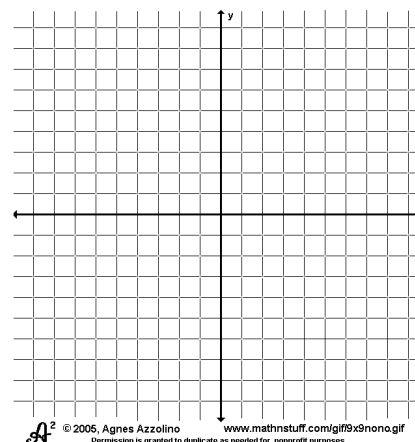


16.) Graph the following piecewise function:

$$\sqrt{4x + 28} \text{ when } -7 \leq x < -5$$

$$f(x) = -3|2x + 6| + 8 \text{ when } -5 \leq x < 0$$

$$(8x - 16)^{\frac{1}{3}} + 2 \text{ when } 0 \leq x$$



Name: _____ Intro to Functions Review

17.) What is the inverse of $f(x) = \frac{3x+4}{5x-1}$
