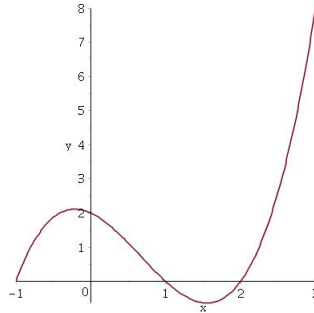
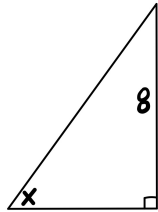


Review Problems for Math 101

1. Let $f(x) = \frac{4}{x+1}$. Evaluate $f(2)$ and $f(a^2 + 3)$.
2. Below is the graph of the function $f(x) = x^3 - 2x^2 - x + 2$.



- (a) Use the graph of $f(x)$ to find the x value(s) where $f(x) = 0$.
 - (b) When $1 < x < 2$, is $f(x) > 0$ or $f(x) < 0$?
3. Is the point $(0, 1)$ on the graph of the function $h(x) = \frac{x^2-1}{x^2+1}$?
 4. Find the points of intersection of the curves $y = x^2 - 4x + 2$ and $y = x - 4$.
 5. Simplify the following
 - (a) $81^{\frac{3}{4}}$
 - (b) 3^{-2}
 - (c) $\frac{f(x+h)-f(x)}{h}$ where $f(x) = x^2 + 2x$.
 6. Find the equation of the line that passes through the point $(3, 2)$ and has a slope of 3.
 7. If $\tan(x) = \frac{4}{3}$, find x and the lengths of the other two sides of the given triangle.



8. Find solution(s) to the equation $3x^2 - 2x - 5 = 0$.
9. Simplify the following expression by writing it as one fraction:

$$\frac{1}{x} - \frac{x+2}{x-1}$$