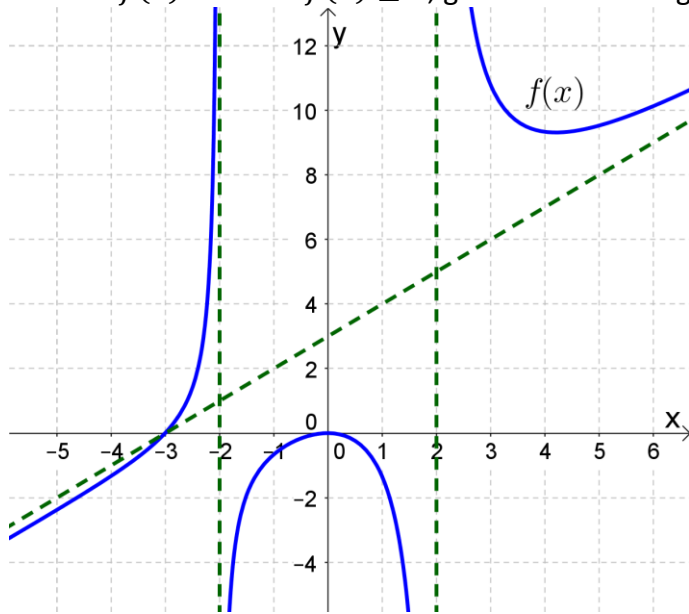


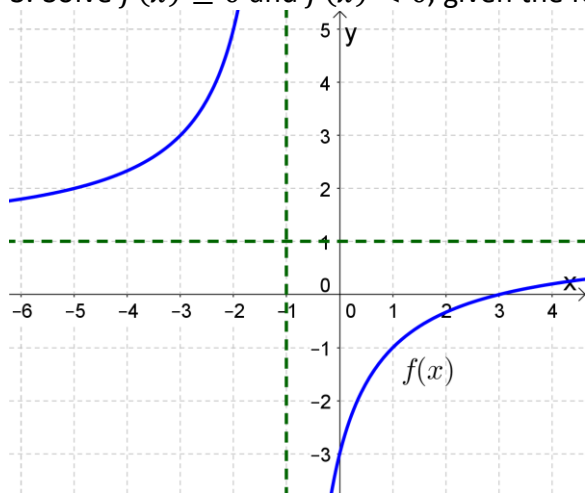
1. Solve  $f(x) > 0$  and  $f(x) \leq 0$ , given the following graph of  $f$ .



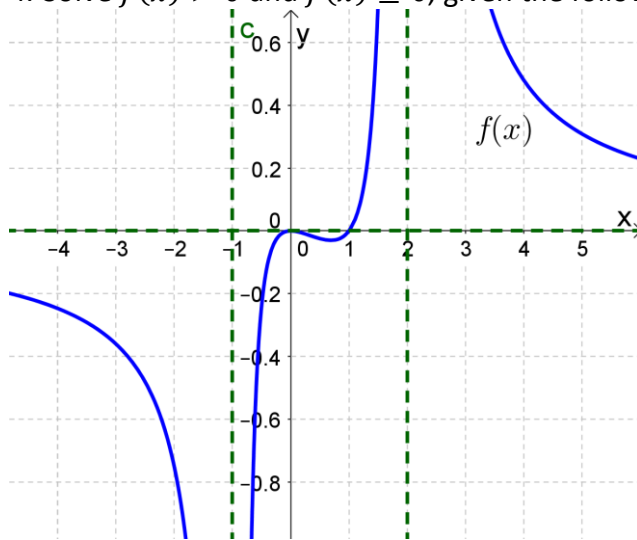
2. Solve  $\frac{(x+3)^2}{x^2-4} \geq 0$ .

Q: What five-letter word becomes shorter when you add two letters to it?

3. Solve  $f(x) \geq 0$  and  $f(x) < 0$ , given the following graph of  $f$ .



4. Solve  $f(x) > 0$  and  $f(x) \leq 0$ , given the following graph of  $f$ .



5. Solve  $x^3 < x^2 + 6x$ .

6. Solve  $2x^2 + 2 \geq 5x$ .

7. Solve  $\frac{2x}{x+2} \geq 3$ .

8. Solve  $\frac{x+1}{x-3} \leq 2$ .

9. Find the domain of  $f(x) = \sqrt{\frac{x}{(2-x)(5+x)}}$ .

10. Find the domain of  $f(x) = \sqrt{2x^4 + 2x^3 - 4x^2}$ .

Optional exercises from the Sullivan book if you'd like more practice:  
4.4 (p.218) #5, 7, 19-41 odd