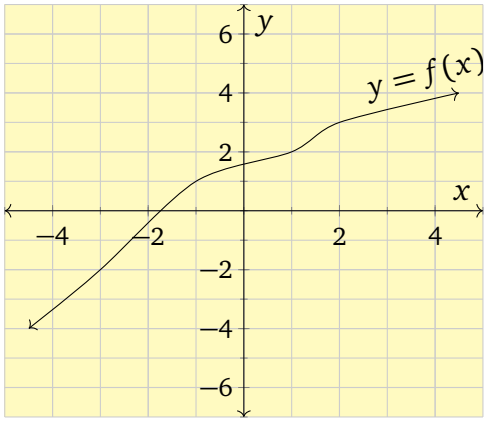
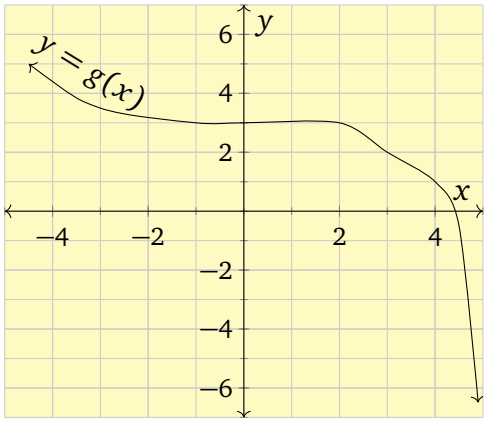
Solving Inequalities Graphically

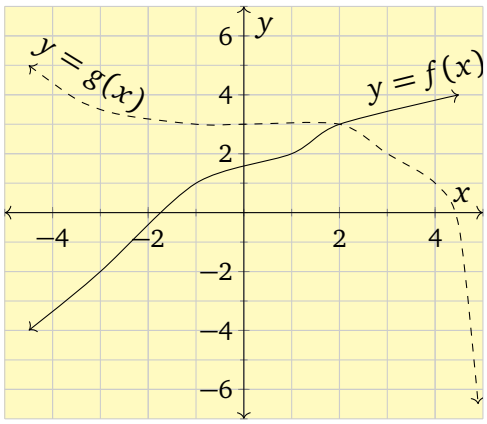
1. Here is the graphs of f. Solve $f(x) < -2$. The answer to a question like this is the collection of all x-values that make the inequality true. In general with an inequality, it will be appropriate to use interval notation to express your answer.



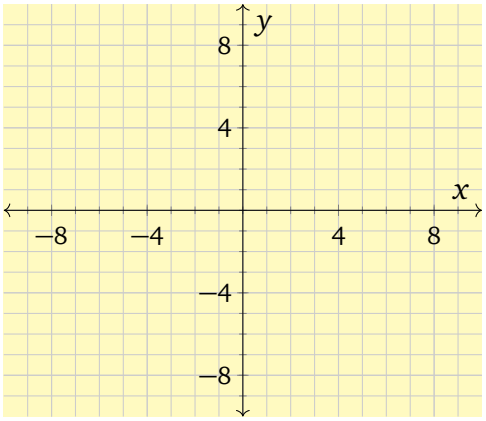
2. Here is the graphs of g. Solve $g(x) \leq 2$.



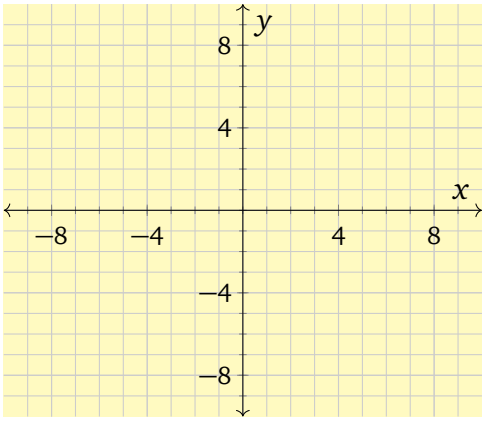
3. Here are the graphs of f (solid) and g (dashed). Solve: $f(x) < g(x)$.



4. Solve the inequality $x^2 - 4x - 5 \leq 0$ by first making a graph of $y = x^2 - 4x - 5$.



5. Solve the inequality $(x-3)^2 - 2 > -x + 7$ by first making a graph of the functions on either side of the equation.



6. Solve the inequality $|x+1| \leq x^3 - 5x$ by first making a graph of the functions on either side of the equation. For this problem and this problem only, use a graphing calculator or a graphing app to make the graphs.