

Solving Inequalities

Use your calculator to solve the inequalities in questions 1, 2, and 3.

1. $y = 4x^5 - 6x^4 - 3x^2 + 3 > x^3 + 2x + 2$

2. $\ln(x) > \sin(x)$ (use radian measure.)

3. $\frac{x^3 - 2x}{x^3 - 3x} > 0$

Do not use your calculators in questions 4, 5, and 6. Solve each inequality exactly.

4. On what interval(s) is $f(x) = x^2 + 5x - 1$ less than $g(x) = 3x^2 + 2x$?

5. $x^3 - 4x^2 + x + 6 \geq 0$

6. $\frac{x^3 - 2x}{x^3 - 3x} > 0$