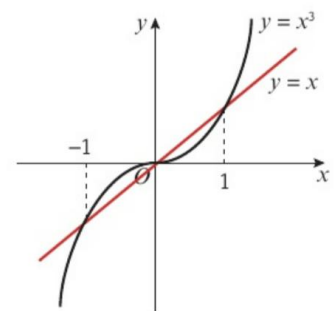
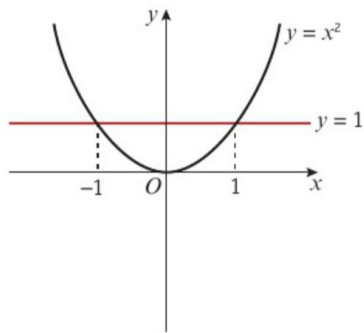
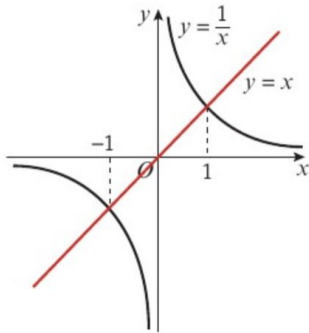


4A Inequalities with Variables as Denominators

Consider $\frac{1}{x} < x$



1. Solve $\frac{x^2}{x-2} < x + 1$, $x \neq 2$

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

4B Using Graphs to Solve Inequalities

1. By using appropriate sketches, solve $\frac{1}{x} > 1$

2.

a) On the same axes sketch the graphs of the curves with equations $y = \frac{7x}{3x+1}$ and $y = 4 - x$.

b) Find their points of intersection.

c) Hence solve $\frac{7x}{3x+1} < 4 - x$

4C Modulus Inequalities

1. Solve $|x^2 - 4x| < 3$

2. Solve $|3x| + x \leq 2$

3. Solve $|x^2 - 19| \leq 5(x - 1)$

4. (1f from textbook)

$$\frac{x+3}{|x|+1} < 2$$