

interval and represent it in the real line. The solution is

(a) $x^2 - 13 < x$

(b) $-x^2 - x^{\frac{1}{3}} \leq 0$

(c) $\frac{x+1}{x-1} \geq \frac{x}{x-1}$

(d) $\sqrt{x}^2 + x - 2 > 0$

(e) $2x + 5 < 3x - 4$

(f)

$$\frac{x+2}{x-3} < 2$$

interval and represent it in the real line. The solution is

• $\frac{x^2 - x}{x^2 - 4} \geq 0$

• $\frac{2x+2}{x} < \frac{4}{x+1}$

• $x^2 - 9 < 0$

• $3|x-1| + 2x > 3x - 2$

interval and represent it in the real line. The solution is

• $y = 3x^2 - 1$

• $w^2 = 3y - 1$

• $x - 2y = 4$

$$\begin{cases} 2x & \text{if } x < 1 \\ 6 - 2x & \text{if } x > 3 \end{cases}$$

Theorem 6.1 Distance between two parallel lines

- $f(x) = 3x^2 - 1$
- $g(x) = x^3 + 2x$
- $h(x) = 3x^2 - 1 + x$
- $t(x) = x^3 + 2x - 1$

1. line

2. vertex

3. domain

4. range

5. axes of symmetry