PAG. 145 N 268

$$\frac{2x}{x^2-9} > \frac{1}{x-3} - \frac{x-2}{x^2+6x+9}$$

$$(x-3)(x+3) \qquad (x+3)^2$$

$$\frac{2x}{(x-3)(x+3)} - \frac{1}{x-3} + \frac{x-2}{(x+3)^2} > 0$$

$$\frac{2x(x+3) - (x+3)^2 + (x-2)(x-3)}{(x-3)(x+3)^2} > 0$$

$$\frac{2x^2 + \cancel{6x} - \cancel{x^2} - 9 - \cancel{6x} + \cancel{x^2} - 3x - 2x + 6}{(x-3)(x+3)^2} > 0$$

$$\frac{2x^2 - 5x - 3}{(x-3)(x+3)^2} > 0$$

$$\frac{2x^2-5x-3}{(x-3)(x+3)^2} \geq 0$$

D_1 D_2

N

$$2x^2-5x-3 \geq 0$$

$$\Delta = 25+24 = 49$$

$$x = \frac{5 \pm 7}{4} = \begin{cases} -\frac{1}{2} \\ 3 \end{cases}$$

$$x \leq -\frac{1}{2} \vee x \geq 3$$

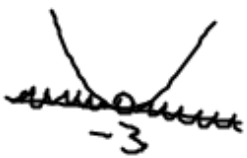
D_1 $x-3 \geq 0$

$x \geq 3$

D_2 $x^2+6x+9 > 0$

$\Delta = 36-36 = 0$

$$x = \frac{-6}{2} = -3$$

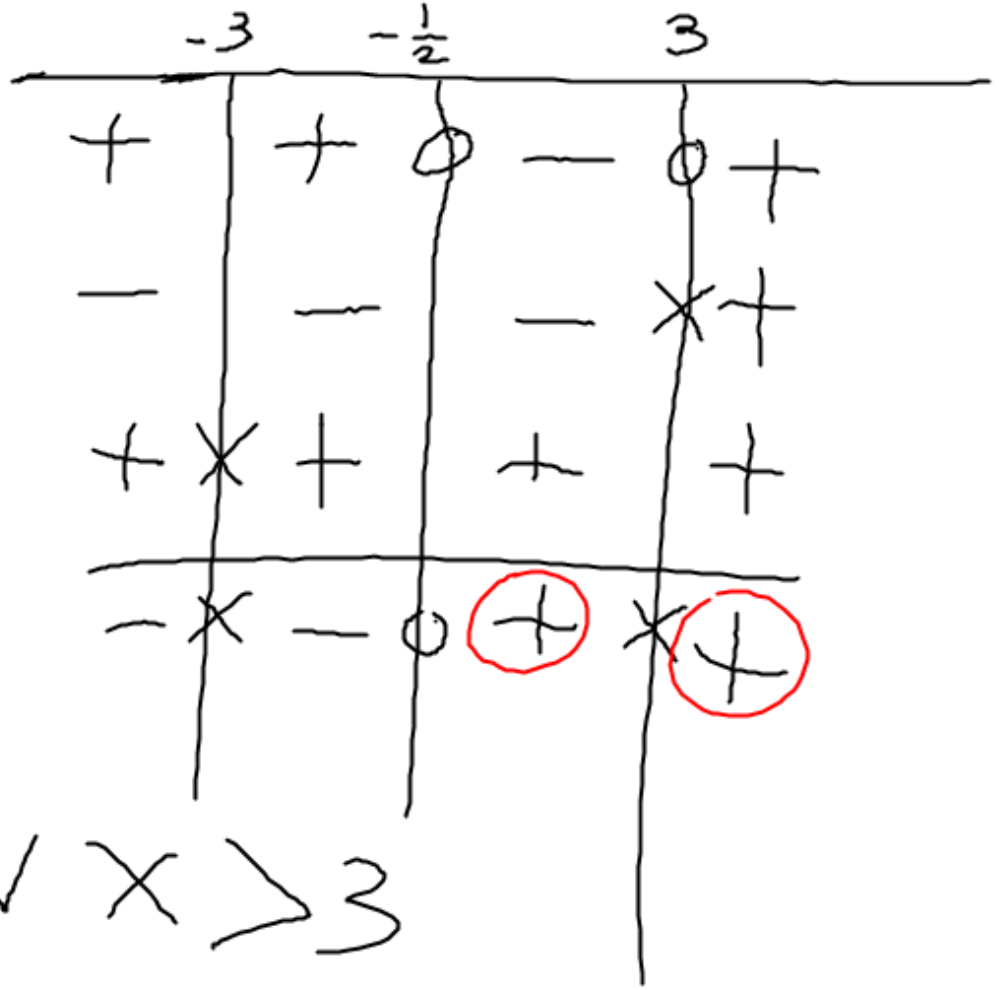


$x \neq -3$

N] $x < -\frac{1}{2} \vee x > 3$

D_1] $x > 3$

D_2] $x \neq -3$



$$-\frac{1}{2} < x < 3 \vee x > 3$$

OPPURE $x > -\frac{1}{2} \wedge x \neq 3$