

$$\mathbf{311} \quad \begin{cases} x^3 - 8x^2 + 13x - 6 \leq 0 \\ \frac{1}{x^2 - 2x + 1} \geq 0 \\ \frac{x - 6}{x^2 - 2x - 3} < 0 \end{cases} \quad [x < -1 \vee 3 < x < 6]$$

$$\mathbf{312} \quad \begin{cases} x^3 + 2x^2 > 2x - 3 \\ 3 - 2x - x^2 > 0 \\ \frac{1}{x^3 + 27} > 0 \end{cases} \quad [-3 < x < 1]$$

$$\mathbf{313} \quad \begin{cases} x^4 - 5x^2 + 4 \geq 0 \\ \frac{x}{1 - \sqrt{2}} < 0 \\ x\sqrt{3} + 1 \geq x\sqrt{2} - 1 \end{cases} \quad [0 < x \leq 1 \vee x \geq 2]$$

$$\mathbf{314} \quad \begin{cases} \frac{2x + 3}{3 - 2x} > \frac{1}{2} \\ \frac{1}{4 + x^2} \leq \frac{1}{16 - x^4} \end{cases} \quad [\forall x \in \mathbb{R}]$$

$$\mathbf{315} \quad \begin{cases} \frac{x}{x^2 - x} > \frac{x^3}{x^2 - x} \\ \frac{(x - 2)(x^2 - 3x + 2)}{x^4 + x^3 - x - 1} \leq 0 \end{cases} \quad [x < -1]$$

$$\mathbf{316} \quad \begin{cases} \frac{2x^4}{6 - x} \geq 6 + x \\ (2x + 3)^2 + 3 < 2x^2 - x - 3 \end{cases} \quad [-5 < x \leq -2]$$

$$\mathbf{317} \quad \begin{cases} 1 + \frac{x}{x + 1} - \frac{x - 1}{x - 2} \geq \frac{x + 1}{x + 2} \\ \frac{x + 1}{x^2} > 0 \end{cases} \quad [0 < x < 2]$$

$$\mathbf{318} \quad \begin{cases} (4x - 1)^2 \geq 36 \\ \frac{1}{x + 1} < \frac{1}{7}x + \frac{1}{21} \end{cases} \quad \left[-\frac{10}{3} < x \leq -\frac{5}{4} \vee x > 2\right]$$

$$\mathbf{319} \quad \begin{cases} \frac{x^2 - 6x - 3}{1 - 2x} \geq 0 \\ \frac{x + 2 - 6x^2}{(3x - 2)^2} \geq 0 \end{cases} \quad \left[-\frac{1}{2} \leq x \leq 3 - 2\sqrt{3} \vee \frac{1}{2} < x < \frac{2}{3}\right]$$

$$\mathbf{320} \quad \begin{cases} \frac{7 + 3x^2(x - 4)}{x - 3} < x + 3 \\ -\frac{5}{(3x - 4)^3} > 0 \end{cases} \quad \left[-1 < x < \frac{4}{3}\right]$$

$$\mathbf{321} \quad \begin{cases} \frac{5}{2}x - 1 \leq \frac{8}{x + 2} \\ 2x^3 - 4x - x^2 + 3 < 0 \end{cases} \quad \left[-2 < x < -\frac{3}{2}\right]$$

$$\mathbf{322} \quad \begin{cases} \frac{2 - x}{3x} + \frac{1 + x}{2x + 1} > \frac{x^2 + 8}{4x^2 + 2x} \\ x^3 - 8 \leq 0 \\ \frac{3x + 4}{x - 2} < -\frac{3}{2}x \end{cases} \quad \left[-\frac{1}{2} < x < 0\right]$$

$$\mathbf{323} \quad \begin{cases} \frac{x^2 + 1}{10} + \frac{x}{x - 6} \geq 0 \\ \frac{5}{1 - x} < \frac{8 - 5x}{x^2 - 1} \end{cases} \quad [x < -1 \vee 2 \leq x \leq 3 \vee x > 6]$$

$$\mathbf{324} \quad \begin{cases} \frac{x^2 - 6x}{x^3 + x^2 - 2x} \leq 0 \\ \frac{2}{x + 1} > \frac{1}{x - 3} \end{cases} \quad [1 < x < 3]$$

$$\mathbf{325} \quad \begin{cases} \frac{2 + x}{x^2 - x} > \frac{1}{x + 2} \\ x^4 + 5x^2 - 36 \geq 0 \end{cases} \quad [x < -2 \vee x \geq 2]$$

$$\mathbf{326} \quad \begin{cases} (x + 1)(x + 2)(x + 3) > (x - 1)(x - 2)(x + 3) \\ \frac{1}{2x^2 - 4x} \geq \frac{x - 2}{8x} \end{cases} \quad [2 < x \leq 4]$$

$$\mathbf{327} \quad \begin{cases} \frac{x^5 + x + 2}{x^2 + 5} > 0 \\ \frac{x - x^3}{2(x^3 - 4x + 3)} \leq 0 \\ x^2 \leq 0 \end{cases} \quad [x = 0]$$

$$\mathbf{328} \quad \begin{cases} \frac{1 - 5x + 4x^2}{1 - 3x + 2x^2} > 1 \\ x^8 \geq -10^8 \end{cases} \quad \left[x < 0 \vee \frac{1}{2} < x < 1 \vee x > 1\right]$$

$$\mathbf{329} \quad \begin{cases} \frac{x^2 - 1}{2} \geq \frac{2}{x^2 - 1} \\ \frac{x^2 + 1}{2} \geq \frac{2}{x^2 + 1} \end{cases} \quad [x \leq -\sqrt{3} \vee x \geq \sqrt{3}]$$