

# ESERCIZI IN PIÙ

## DISEQUAZIONI INTERE E SCOMPOSIZIONI IN FATTORI

Risolvi le seguenti disequazioni.

- |           |   |   |
|-----------|---|---|
| <b>1</b>  | $x^4 - 2x^3 - 8x^2 + 18x - 9 \geq 0$                        | $[x \leq -3 \vee x \geq 3 \vee x = 1]$  |
| <b>2</b>  | $-3x^4 + 7x^3 - 2x^2 < 0$                                   | $\left[ x < 0 \vee 0 < x < \frac{1}{3} \vee x > 2 \right]$                    |
| <b>3</b>  | $3x^5 - 12x^3 \leq 0$                                       | $[x \leq -2 \vee 0 \leq x \leq 2]$  |
| <b>4</b>  | $3x^2 - 3 - 6x^3 + 6x > 0$                                  | $\left[ x < -1 \vee \frac{1}{2} < x < 1 \right]$                              |
| <b>5</b>  | $2x^7 - 4x^5 + 2x^3 < 0$                                    | $[x < -1 \vee -1 < x < 0]$  |
| <b>6</b>  | $\frac{5}{2}x^2 - \frac{18}{5} < 0$                         | $\left[ -\frac{6}{5} < x < \frac{6}{5} \right]$                               |
| <b>7</b>  | $\frac{x^2}{3} + \frac{3}{4} - x \leq 0$                    | $\left[ x = \frac{3}{2} \right]$  |
| <b>8</b>  | $x^5 - 2x^4 - 3x^3 > 0$                                     | $[-1 < x < 0 \vee x > 3]$   |
| <b>9</b>  | $x^3 - \frac{1}{3}x^2 - \frac{1}{4}x + \frac{1}{12} \leq 0$ | $\left[ x \leq -\frac{1}{2} \vee \frac{1}{3} \leq x \leq \frac{1}{2} \right]$ |
| <b>10</b> | $125x^3 - 75x^2 + 15x - 1 > 0$                              | $\left[ x > \frac{1}{5} \right]$  |
| <b>11</b> | $3x^3 - 13x^2 + 16x - 4 > 0$                                | $\left[ \frac{1}{3} < x < 2 \vee x > 2 \right]$                               |
| <b>12</b> | $(6x^2 - x - 1)(2x^3 + 16) < 0$                             | $\left[ x < -2 \vee -\frac{1}{3} < x < \frac{1}{2} \right]$                   |
| <b>13</b> | $12x^4 + 60x^3 + 75x^2 \leq (2x + 5)^3$                     | $\left[ -1 \leq x \leq \frac{5}{3} \vee x = -\frac{5}{2} \right]$             |
| <b>14</b> | $10x(x - 5)(x + 2) < x^3 - 9x^2 + 4x + 80$                  | $\left[ x < -\frac{4}{3} \vee -\frac{4}{3} < x < 5 \right]$                   |
| <b>15</b> | $19x - 2 > x^2(20x^2 - 64x + 57)$                           | $\left[ \frac{1}{5} < x < \frac{1}{2} \vee \frac{1}{2} < x < 2 \right]$       |