

1. Risolvi le seguenti equazioni di II grado:

$$15y^2 - y - 11 = 0$$

$$5x^2 - 6x + 1 = 0$$

$$3a^2 - 8a + 5 = 0$$

$$2y^2 + 3y - 20 = 0$$

$$x^2 - 9x - 22 = 0$$

$$8a^2 + 10a - 7 = 0$$

$$y^2 - y + 1 = 0$$

$$6x^2 - 5x - 6 = 0$$

$$6a^2 + 13a + 6 = 0$$

$$15y^2 - y = 0$$

$$5x^2 - 6x = 0$$

$$3a^2 - 8a = 0$$

$$2y^2 + 3y = 0$$

$$x^2 - 9x = 0$$

$$8a^2 + 10a = 0$$

$$y^2 - 1 = 0$$

$$6x^2 + 6 = 0$$

$$4a^2 - 6 = 0$$

$$y^2 + 4 = 0$$

$$6x^2 - 7 = 0$$

$$3a^2 - 9 = 0$$

$$\sqrt{3}y^2 + y - 2\sqrt{3} = 0$$

$$5x^2 - \sqrt{5}x - 2 = 0$$

$$\sqrt{10}a^2 + 3a - \sqrt{10} = 0$$

$$3\sqrt{2}y^2 + 3\sqrt{3}x + \sqrt{2} = 0$$

$$3,2x^2 + 6x - 5 = 0$$

$$4,5x^2 - 7,2x + 2,88 = 0$$

$$(3x - 2)^2 + (2x - 3)^2 = (3x - 2)(3x + 2)$$

$$(2x - 1)^3 - (2x + 1)^3 = (2x + 1)^2$$

$$\left(\frac{2}{5}x - \frac{5}{2}\right)^2 + \left(\frac{2}{5} - \frac{5}{2}x\right)^2 = 2\left(\frac{2}{5} - \frac{5}{2}x\right)\left(\frac{2}{5}x - \frac{5}{2}\right)$$

$$\left(\frac{1}{3}x^2 - \frac{1}{2}x + 1\right)\left(\frac{1}{3}x^2 - \frac{1}{2}x - 1\right) = \left(\frac{1}{3}x^2 - \frac{1}{2}x\right)^2 - \left(\frac{1}{3}x - \frac{1}{2}\right)^2$$

2. Effettua la discussione delle seguenti equazioni letterali:

$$x^2 - 4ax = 0$$

$$2x^2 - (x - a)^2 = 2ax$$

$$x^2 - 2ax + a = 0$$

$$2ax^2 - x + a - 1 = 0$$

$$\frac{x+3}{x+2} + \frac{x}{a^2+4a+3} = \frac{a+5}{a+3}$$

$$\frac{1}{x+1} + \frac{ax}{a-1} = \frac{1-3a}{2-2a}$$