

$$\frac{y+5}{5y-20} + \frac{y-4}{3y-6} = \frac{3}{4}$$

$$\frac{y+5}{5y-20} + \frac{y-4}{3y-6} = 0,75$$

$$-0,75 + \frac{y+5}{5(y-4)} + \frac{y-4}{3(y-2)} = 0$$

$$-0,75 + \frac{(y+5)3(y-2) + (y-4)^2 5}{15(y-4)(y-2)} = 0$$

$$-0,75 + \frac{(y+5)3(y-2) + (y^2 - 8y + 16)5}{15(y-4)(y-2)} = 0$$

$$-0,75 + \frac{3y^2 + 9y - 30 + 5y^2 - 40y + 80}{15(y-4)(y-2)} = 0$$

$$-0,75 + \frac{8y^2 - 31y + 50}{15(y-4)(y-2)} = 0$$

$$\frac{-0,75 \cdot 15(y-4)(y-2) + (8y^2 - 31y + 50)}{15(y-4)(y-2)} = 0$$

$$\frac{-(11,25y^2 - 22,5y - 45y + 90) + (8y^2 - 31y + 50)}{15(y-4)(y-2)} = 0$$

$$\frac{-11,25y^2 + 67,5y - 90 + 8y^2 - 31y + 50}{15(y-4)(y-2)} = 0$$

$$-\frac{3,25y^2 - 36,5y + 40}{15(y-4)(y-2)} = 0$$

$$-\frac{0,25(13y^2 - 146y + 160)}{15(y-4)(y-2)} = 0$$

$$\frac{13y^2 - 146y + 160}{60(y-4)(y-2)} = 0$$

$$13y^2 - 146y + 160 = 0$$

Находим дискриминант.

$$D = b^2 - 4ac = (-146)^2 - 4 \cdot 13 \cdot 160 = 12996$$

$$y_{1,2} = \frac{-b \pm \sqrt{D}}{2a}$$

$$y_1 = \frac{146 - 114}{2 \cdot 13} = \frac{16}{13}; y_2 = \frac{146 + 114}{2 \cdot 13} = 10$$

$$\text{Ответ : } y = \frac{16}{13}; y = 10.$$