

$$143X + 193Y = 189$$

$$93X + 141Y = 45$$

Solution:

We should express X from the first equation:

$$X = \frac{189}{143} - \frac{193Y}{143}$$

Put this X-value to the second equation:

$$93 * \left(\frac{189}{143} - \frac{193Y}{143} \right) + 141Y = 45$$

Divide by 93

$$\left(\frac{189}{143} - \frac{193Y}{143} \right) + \frac{141Y}{93} = \frac{45}{93}$$

Multiply by 143*93:

$$17577 - 17949Y + 20163Y = 6435$$

Collect similar terms:

$$2214Y = -11142$$

and find

$$Y = -\frac{11142}{2214} = -\frac{619}{123} \approx -5.0$$

$$X = \frac{189}{143} - \frac{193Y}{143} = \frac{998}{123} \approx 8.1$$