

Answer on Question #84034 – Math – Algebra

Question

1. In the following equation solve the unknown variable $\frac{5}{8}k + \frac{2}{6}k = k - \frac{1}{2}$

Solution

$$\frac{5}{8}k + \frac{2}{6}k = k - \frac{1}{2}$$

$$\frac{5}{8}k + \frac{2}{6}k - k = -\frac{1}{2}$$

$$\frac{15}{24}k + \frac{8}{24}k - \frac{24}{24}k = -\frac{1}{2}$$

$$\frac{15 + 8 - 24}{24}k = -\frac{1}{2}$$

$$-\frac{1}{24}k = -\frac{1}{2}$$

$$k = -\frac{1}{2} : \left(-\frac{1}{24}\right)$$

$$k = \frac{1}{2} \cdot \frac{24}{1}$$

$$k = 12$$

Answer: $k = 12$.