Answer on Question #60379 – Math – Algebra

Question

Make k the subject of the following two equations. Show each step of working.

1) 5t = 13 − 9k / 7

2) 11k = 13t − 7k / 2t

Solution

1)

$$5t = 13 - \frac{9k}{7}$$

$$5t + \frac{9k}{7} = 13$$

$$\frac{9k}{7} = 13 - 5t$$

$$9k = 7(13 - 5t)$$

$$k = \frac{7}{9}(13 - 5t)$$

$$k = \frac{91}{9} - \frac{35t}{9}$$

2)

$$11k = 13t - \frac{7k}{2t}$$

$$11k + \frac{7k}{2t} = 13t$$

$$\frac{22kt + 7k}{2t} = 13t$$

$$22kt + 7k = 26t^2$$

$$k(22t + 7) = 26t^2$$

$$k = \frac{26t^2}{22t+7}.$$

Answer: 1) $k = \frac{91}{9} - \frac{35t}{9}$; **2)** $k = \frac{26t^2}{22t+7}$.