

Answer on Question #67938 – Math – Algebra

Question

$$\begin{aligned}x+y&=10 \\5.60x+3.50y&=47.6\end{aligned}$$

Solution

$$x+y=10 \quad (1)$$

$$5.60x+3.50y=47.6 \quad (2)$$

It follows from (1) that

$$x=10-y. \quad (3)$$

Substitute $x=10-y$ into the (2):

$$5.60(10-y)+3.50y=47.6.$$

Open brackets and simplify:

$$\begin{aligned}56 - 5.60y + 3.50y &= 47.6; \\-2.10y &= -8.40.\end{aligned}$$

Divide both sides by (-2.10) :

$$\begin{aligned}y &= -8.40 : (-2.10) \\y &= 4.\end{aligned}$$

Substitute $y=4$ into the (3):

$$\begin{aligned}x &= 10-4; \\x &= 6.\end{aligned}$$

Finally one gets

$$x=6, y=4.$$

Answer: $x=6, y=4$.