

$$\therefore 3x + 2x = 60$$

$$5x = 60$$

$$x = 12$$

$$\text{and } \frac{2x}{3} = 8$$

Therefore 12 and 8 are the numbers.

(2)

I spend every year nine-tenths of my income all but \$40; what I save is just \$20 less than one-fourth of my income. How much do I receive per annum?

Let x = my income.

Then by the question $\frac{9x}{10} - 40$ = what I spend.

and $x - (\frac{9x}{10} - 40)$ = what I save.

But by the question $\frac{x}{4} - 20$ = what I save.

$$\therefore \frac{x}{4} - 20 = x - (\frac{9x}{10} - 40)$$

$$\frac{x}{4} - 20 = x - \frac{9x}{10} + 40$$

Multiplying by 20, $5x - 400 = 20x - 18x + 800$

$$5x - 20x + 18x = 800 + 400$$

$$3x = 1200$$

$x = \$400$, which is my income.

(3)

I gave away to a poor person half the money I had in my pocket, and meeting another gave him four-fifths of the remainder; I had then but one dollar left. What sum had I originally?