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Linear Equations in Two Variables



- 1 Find c when $s = 60$ and when $s = 80$.
- 2 Solve the linear equation.
- 3 Complete the Table.
- 4 Identify the solutions to the linear equations with two variables.
- 5 Determine the corresponding value which makes $3t + 6p = 750$ true.
- 6 Sort the solutions to the linear equations with two variables.
- + with lots of tips, answer keys, and detailed answer explanations for all of the problems.



The complete package, including all problems, hints, answers, and detailed answer explanations is available for all [sofatutor.com](https://www.sofatutor.com) subscribers.



Find c when $s = 60$ and when $s = 80$.

Fill in the blanks.

$$5s + 4c = 500$$

First let's find c when $s = 60$:

1. Plugging $s = 60$ into the equation above, we get $\dots\dots\dots_1 + 4c = 500$.
2. Subtracting $\dots\dots\dots_2$ from both sides leads to $4c = \dots\dots\dots_3$.
3. Dividing both sides by $\dots\dots\dots_4$ gives us $c = \dots\dots\dots_5$.

Let's now find c when $s = 80$:

1. Plugging $s = 80$ into the equation above, we get $\dots\dots\dots_6 + 4c = 500$.
2. Subtracting $\dots\dots\dots_7$ from both sides leads to $4c = \dots\dots\dots_8$.
3. Dividing both sides by $\dots\dots\dots_9$ gives us $c = \dots\dots\dots_{10}$.



Hints for solving these problems

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of 6

Find c when $s = 60$ and when $s = 80$.

Hint #1

The opposite operation of addition is subtraction:

$$\begin{array}{r} x + 8 = 30 \\ -8 \quad -8 \\ \hline x = 22 \end{array}$$

Hint #2

The opposite operation of multiplication is division:

$$\begin{array}{r} 8x = 32 \\ \div 8 \quad \div 8 \\ \hline x = 4 \end{array}$$

Hint #3

You can check your solution by plugging the value you get for c as well as the value you are give for s into the equation, and see if you get 500.

For example, for $s = 40$ and $c = 75$:

$$5(40) + 4(75) = 200 + 300 = 500 \quad \checkmark$$

**Answers and detailed answer explanations for these problems****1**
of 6**Find c when $s = 60$ and when $s = 80$.****Answer key:** 1: 300 // 2: 300 // 3: 200 // 4: 4 // 5: 50 // 6: 400 // 7: 400 // 8: 100 // 9: 4 // 10: 25

$$5s + 4c = 500$$

To solve the equation for c with the given s values, just plug each given value into the equation and isolate the variable c using opposite operations:

$$s = 60$$

$$5(60) + 4c = 500$$

$$300 + 4c = 500$$

$$\color{green}{-300} \quad \color{green}{-300}$$

$$4c = 200$$

$$\color{green}{\div 4} \quad \color{green}{\div 4}$$

$$c = 50$$

$$s = 80$$

$$5(80) + 4c = 500$$

$$400 + 4c = 500$$

$$\color{green}{-400} \quad \color{green}{-400}$$

$$4c = 100$$

$$\color{green}{\div 4} \quad \color{green}{\div 4}$$

$$c = 25$$