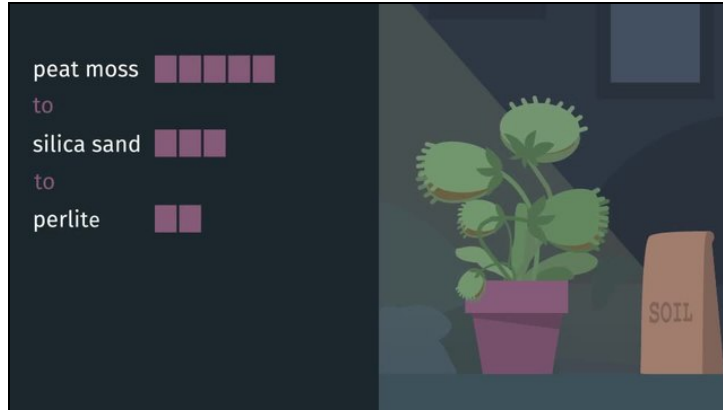




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# Solving Problems with Equivalent Ratios



- 1 Create a tape diagram to represent the given ratios.
- 2 Use tape diagrams and equivalent ratios to solve problems.
- 3 Use tape diagrams to solve the given ratio problem.
- 4 Determine the total number of Venus fly traps and roses in Paul's shop.
- 5 Calculate the solution to the following problems using tape diagrams.
- 6 Confirm or correct the solution to each word problem.
- + 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.



## Create a tape diagram to represent the given ratios.

Highlight the correct number of rectangles to represent the ratios described.

- The ratio of Pepperoni to Mushrooms on a pizza is 12 to 8.
- The ratio of Tomatoes to Mushrooms on the same pizza is 15 to 30.

 P:M:T

P					
M					
T					



## Hints for solving these problems

1  
of 6

### Create a tape diagram to represent the given ratios.

#### Hint #1

If the ratio  $A : B = 25 : 10$ , we can *reduce* this ratio by dividing each value by 5:

- $\frac{25}{5} = 5$
- $\frac{10}{5} = 2$

Therefore, the reduced ratio is  $A : B = 5 : 2$ .

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#### Hint #2

If the ratio  $A : B = 7 : 3$ , we can say that the ratio  $B : A = 3 : 7$ .

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#### Hint #3

Given the following ratios, we can combine them into a single ratio statement involving three values:

- $A : B = 5 : 7$
- $B : C = 7 : 4$
- Therefore:  $A : B : C = 5 : 7 : 4$

We can represent this with a rows of 5, 7, and 4 rectangles.

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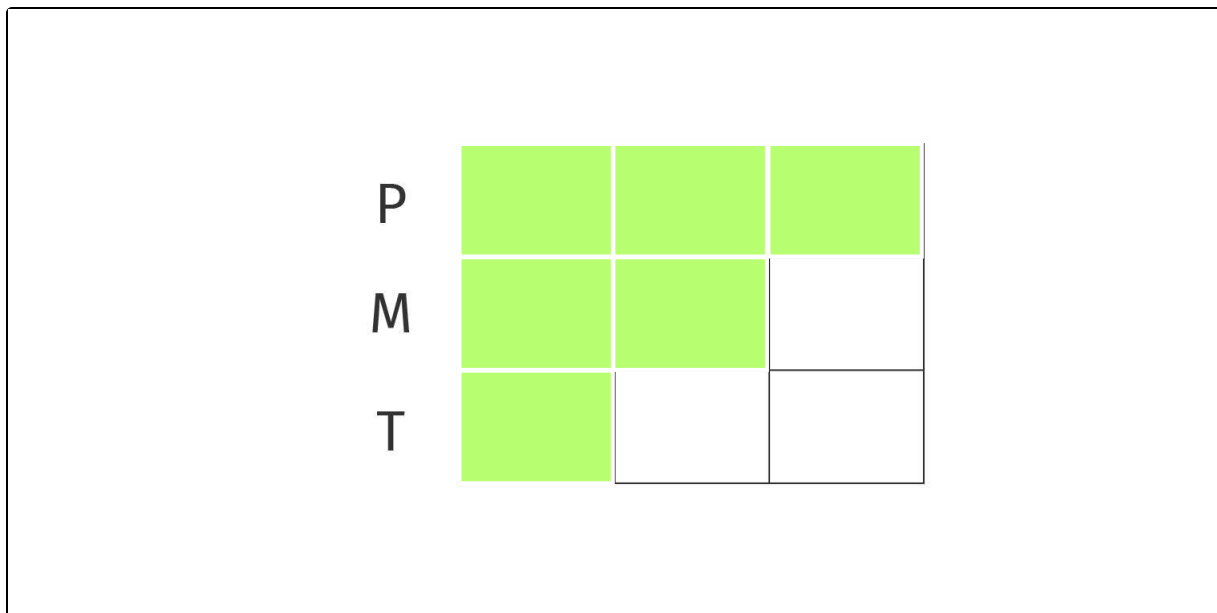


## Answers and detailed answer explanations for these problems

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of 6

Create a tape diagram to represent the given ratios.

 P:M:T



The given ratios are  $P : M = 12 : 8$  and  $T : M = 15 : 30$ .

- $P : M = 12 : 8$  can be reduced.
- Dividing each value by 4 gives us  $P : M = 3 : 2$ .
- $T : M = 15 : 30$  can also be reduced.
- Dividing each value by 2 gives us  $T : M = 1 : 2$ .
- If  $T : M = 1 : 2$ , then  $M : T = 2 : 1$ .
- Therefore,  $P : M : T = 3 : 2 : 1$ .
- In the tape diagram,  $P$  gets 3 rectangles,  $M$  gets 2, and  $T$  gets 1.