

Finding the Whole Given the Final Amount

Objectives:

- To find what the “original amount” when the final amount and the percent are known

Outcomes:

- To complete the worksheet “Finding the Original Amount” with at least a 90% score

Warm-Up:

The percent box takes the mystery out of where to put the numbers when finding the original amount. The percent square always has a base of 100%. For sales tax and items that are marked up, have students add the percent to the 100% and place it in the percent square. For discounts, subtract the percent from 100% and place in the percent square.

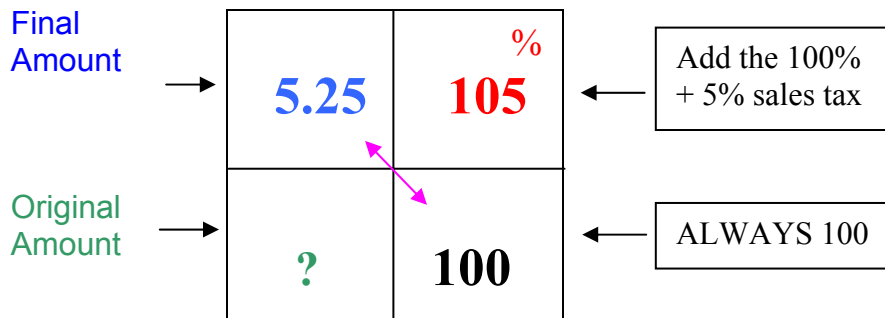
New Instruction:

The boxes are color coordinated for easy placement of numbers.

FINDING THE ORIGINAL AMOUNT

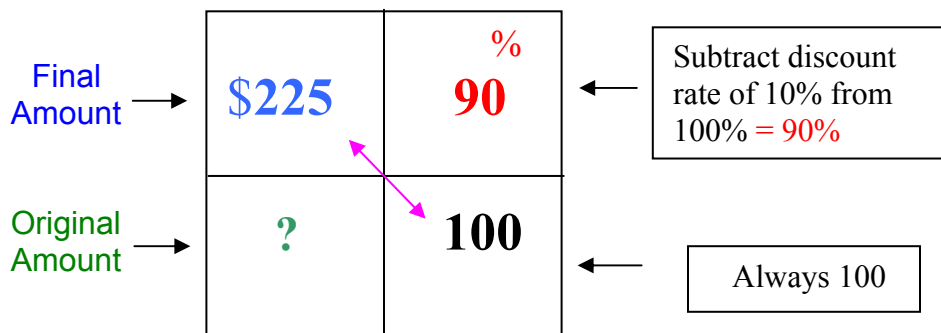
Final Amount: \$5.25

Sales Tax rate: 5%



1. **Fill in** final amount. (**5.25**)
2. **Add 100%** + increase rate amount (**5%**); then **fill in** percent square with the result. (**105**)
3. **Cross-multiply two** filled-in squares. (**5.25 x 100**)
4. **Divide** the answer (525) by the extra number (**105**) to get original amount.
5. **Original amount = 5.00**

Final Amount: **\$225.00**
 Discount Rate: **10%**



1. **Fill in final** amount. (**225**)
2. **Subtract** discount rate from 100% (100% - 10%); then **fill in** percent square with the result. (**90**)
3. **Cross-multiply two** filled-in squares. (**225 x 100**)
4. **Divide** the answer (**22500**) by the extra number (**90**) to get the **original** amount.
5. **Original Amount = \$250.00**

Feedback and Review:

Practice what you have learned by doing the following problems.

1. **Find the original amount:**
 Final amount: **\$50**
 Rate of decrease: $4\frac{1}{2}\%$ (100% - 4.5% = **95.5%**)

2. Find the original amount:
Final amount: \$100
Rate of increase: 10% ($100\% + 10\% = 110\%$)
3. Find the original amount:
Final amount: \$5.25
Sales tax rate: 6% ($100\% + 6\% = 106\%$)
4. Susie paid \$20.50 for her groceries. The sales tax rate was 8%. What was the price of the groceries alone?
5. Holly bought a sweater for \$9.00. This was after the clerk took 10% off. What was the original price of the sweater?
6. A recent poll indicates that the average number a family eats fast food per week has increased 50% over the previous poll numbers. If the number is now 3 times per week, what was the original number?

Answers:

1. \$52.36
2. \$90.91
3. \$4.95
4. \$18.98
5. \$10.00
6. 2

Transfer of Knowledge or Skills:

For further practice, go to <http://www.funbrain.com/cgi-bin/pw.cgi> .