

Reverse Percentage



Use the diagram to find the missing original amount, then answer without a diagram.

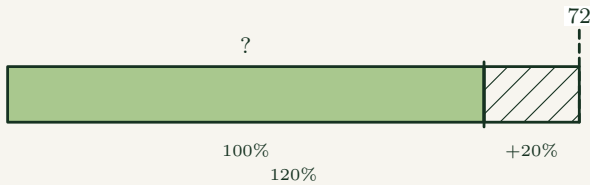
Name _____

Date _____

Show your method

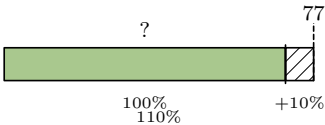
To reverse an increase, divide by $(1 + \text{the rate as a decimal})$. To reverse a decrease, divide by $(1 - \text{the rate as a decimal})$.

Worked example The original price increased by 20% to become \$72. Find the original price.

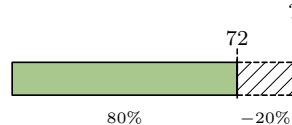


Multiplier: $1 + 0.2 = 1.2$
 Divide: $72 \div 1.2 = 60$
 So the original price was \$60.

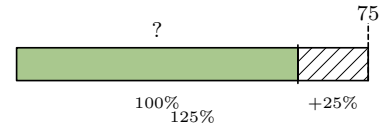
1. Find the missing original amount marked ?.



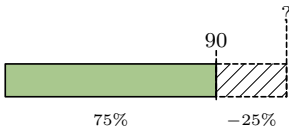
2. Find the missing original amount marked ?.



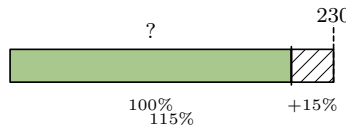
3. Find the missing original amount marked ?.



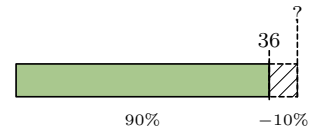
4. Find the missing original amount marked ?.



5. Find the missing original amount marked ?.



6. Find the missing original amount marked ?.



7. After a 25% increase, an amount is 100. Find the original amount.

8. After a 10% decrease, an amount is 135. Find the original amount.

9. After a 75% increase, an amount is 56. Find the original amount.

Reverse Percentage (continued)

Apply the method to money and real-world contexts.



Name _____

Date _____

10. After a 15% decrease, an amount is 51. Find the original amount.

11. After a 20% increase, an amount is 54. Find the original amount.

12. A value decreased by 12% to 220. Find the original value.

13. A \$44 sale price follows a 20% discount. Find the original price.

14. A \$51.75 total includes 15% GST. Find the pre-GST price.

15. A population of 380 is 5% lower than the original. Find the original population.

16. A \$182 price is 30% higher than the original. Find the original price.

17. A car's value fell 8% to \$14 720. Find its original value.

18. A price increased 10%, then decreased 10%, to become \$49.50. Find the original price.
