

Solving Problems Involving Percent of Increase or Decrease

Ex 1.

A textbook costs \$105. If the sales tax rate is 8.5%, calculate the sales tax and the total amount of the purchase.

$$\begin{aligned}\text{Initial amount} + \text{Amount of increase} &= \text{Final amount} \\ \text{Amount of increase} &= (\% \text{ increase}) \times (\text{Initial amount})\end{aligned}$$

Ex 2.

Rebecca's current salary is \$65,000. If she gets a 5% raise, what is her new salary?

Ex 3.

William receives a raise of \$1500, which is a 4% increase to his salary. What was his former salary?

Ex 4.

After an 8% raise, Jason's salary is \$54,000. What was his former salary?

$$\text{Initial amount} - \text{Amount of decrease} = \text{Final amount}$$
$$\text{Amount of decrease} = (\% \text{ decrease}) \times (\text{Initial amount})$$

Ex 5.

A 15% discount is to be applied to a computer with an initial price of \$1200. What are the discount amount and final price?

Ex 6.

Erik buys a scientific calculator discounted 20%. If the price after the discount was \$32, what was the initial price?

Ex 7.

Adriana was making \$30.00 per hour. She is given a raise so that now she is making \$32.50 per hour. What was the percent of the increase? (Round your answer to the nearest tenths.)