

Percent Increase or Decrease Shortcuts

1. Walmart sells a DVD player for \$59.49. Calculate the GST to be paid on the DVD, and then determine the total cost of the DVD player.

Calculating the cost of an item, including GST, means the cost will be 105% (100% + 5%) of the original price.

$$\begin{aligned}\text{total cost} &= \$59.49 \times 105\% \\ &= \$59.49 \times 1.05 \\ &= \$62.46\end{aligned}$$

The DVD player will cost \$62.46.

2. Alycia needs a new pair of glasses. The frames are on sale for 30% off. The original price of the frames is \$229.00. What is the sale price of the frames, before GST?

Calculating a 30% discount, before GST, means the price will be 70% (100% - 30%) of the original price.

$$\begin{aligned}\text{sale price} &= \$229.00 \times 70\% \\ &= \$229.00 \times 0.70 \\ &= \$160.30\end{aligned}$$

The sale price of the frames, before GST, is \$160.30.

3. Jim owns a leather shop. He buys leather jackets from the manufacturer for \$250 each. Then, he marks the jackets up 75% so he can sell them in his store for a profit. What is the price of the jackets in Jim's store?

Calculating a 75% markup means the price paid will be 175% (100% + 75%) of the manufacturer's price.

$$\begin{aligned}\text{store price} &= \$250.00 \times 175\% \\ &= \$250.00 \times 1.75 \\ &= \$437.50\end{aligned}$$

The price of the jackets in Jim's store is \$437.50.