

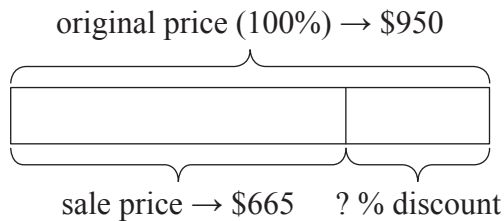
# Percentage

## Word Problems

### Example 1

Andy buys a computer for \$665. The original price of the computer is \$950. What is the percentage discount for the computer?

**Solution:**



We need to find the price difference of the computer:

$$\$950 - \$665 = \$285$$

In order to find the percentage discount of the computer, we have to take the price difference divided by the original price, multiplied by 100%:

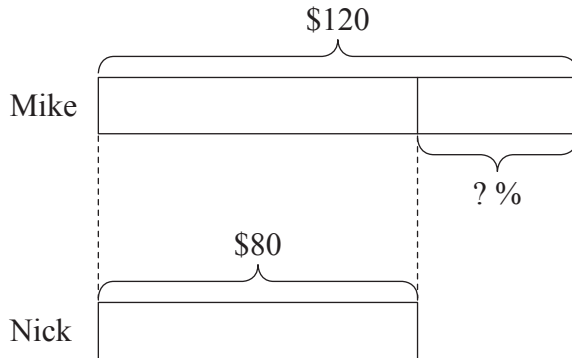
$$\$285 \div \$950 \times 100\% = 30\%$$

The percentage discount for the computer is 30%.

## Example 2

Mike spent \$120 and Nick spent \$80.  
By what percentage did Mike spend more than Nick?

**Solution:**



We need to find the amount difference:

$$\$120 - \$80 = \$40$$

In order to find the percentage difference, we have to take the amount difference divided by the amount Mike spent, multiplied by 100%:

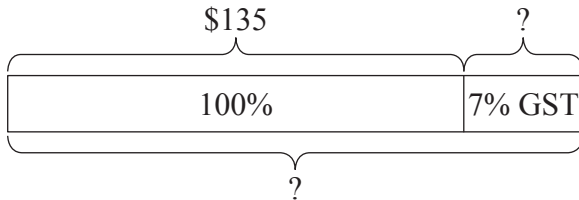
$$\$40 \div \$120 \times 100\% = 33\frac{1}{3}\%$$

Mike spent  $33\frac{1}{3}\%$  more than Nick.

### Example 3

The price of a dress is \$135 excluding 7% GST. Find the price of the dress after the 7% GST is included.

**Solution 1:**



We need to find the amount for 7% GST:

$$100\% \rightarrow \$135$$

$$1\% \rightarrow ?$$

$$\$135 \div 100\% = \$1.35$$

$$1\% \rightarrow \$1.35$$

$$7\% \rightarrow ?$$

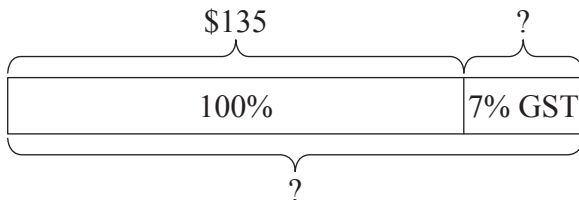
$$\$1.35 \times 7 = \$9.45$$

Since the amount for 7% GST is \$9.45, we can find the price of the dress including the GST:

$$\$135 + \$9.45 = \$144.45$$

The price of the dress is \$144.45.

**Solution 2:**



Since the amount for 100% is \$135, we can find the price of the dress including the 7% GST:

$$100\% \rightarrow \$135$$

$$1\% \rightarrow ?$$

$$\$135 \div 100\% = \$1.35$$

$$1\% \rightarrow \$1.35$$

$$107\% \rightarrow ?$$

$$\$1.35 \times 107 = \$144.45$$

The price of the dress is \$144.45.

Instead of finding the amount of 7%, we add it to the price of the dress. We can then find the amount for 107% (100% + 7% GST) as it is a more direct way of finding the answer.

Adapted:

Conquer Model Drawing for Upper Primary Levels

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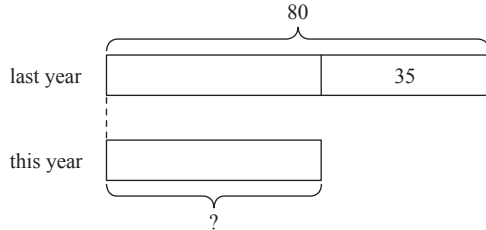
Look for other useful resources: [www.saggrp.com](http://www.saggrp.com)



Solutions:

# Percentage

1.



We can find the percentage decrease by taking the difference, divided by the number from last year and multiplied by 100%.

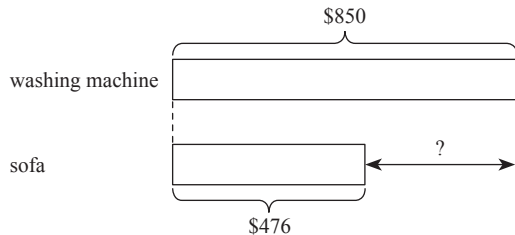
Last year  $\rightarrow$  80

Decrease  $\rightarrow$  35

$$\frac{35}{80} \times 100\% = 43.75\%$$

The percentage decrease is 43.75%.

2.



We can find the amount difference between the price of the washing machine and the price of the sofa:

Washing machine  $\rightarrow$  \$850

Sofa  $\rightarrow$  \$476

Price difference  $\rightarrow$  \$850 - \$476 = \$374

We can now find the percentage difference:

$$\frac{374}{850} \times 100\% = 44\%$$

Mr Lim paid 44% less for the sofa than for the washing machine.