

# Activity 11 Assessment

## Solving Percent Problems

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Calculates a percent increase

In 2020, the price of a block of butter was \$5.20.

In 2 years, the price rose by about 11%.

What was the price of butter in 2022?

The price of butter in 2022 is  $(100\% + 11\%) = 111\%$  of its price in 2020.

So, the price of butter in 2022 is:  
 $111\%$  of \$5.20  
 $= 1.11 \times \$5.20$   
 $\approx \$5.77$

Calculates a percent decrease

In 2001, the population of polar bears was about 1500.

By 2010, the population had decreased by 40%.

What was the population of polar bears in 2010?

The population in 2010 was  $(100\% - 40\%) = 60\%$  of its population in 2001.

So, the population of polar bears in 2010 was:  
 $60\%$  of 1500  
 $= 0.60 \times 1500$   
 $= 900$

Solves a problem involving combined percents

A person buys a Canadian flag for \$15.99.

How much would it cost in your province?

For example, in SK:  
 $6\%$  PST and  $5\%$  GST =  $11\%$  tax

Total cost of the flag:  
 $111\%$  of \$15.99  
 $= 1.11 \times \$15.99$   
 $\approx \$17.75$

Solves a problem involving consecutive percents

In 2015, the average price of a house in Canada was \$413 000.

By 2020, this price had increased by about 28%.

By the middle of 2022, the average price in 2020 had increased by a further 26%.

What was the average price of a house in June 2022?

In 2020, the price was:  
 $128\%$  of \$413 000  
 $= 1.28 \times \$413\ 000$   
 $= \$528\ 640$

In 2022, the price was:  
 $126\%$  of \$528 640  
 $= 1.26 \times \$528\ 640$   
 $= \$666\ 086.40$

The average price of a house in 2022 was about \$666 000.

### Observations/Documentation