

# Increasing/Decreasing by a Percentage

Video 238 on www.corbettmaths.com

### Examples

Workout





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Question 1



- (a) Increase 20 by 50%
- (d) Increase 400 litres by 20%
- (g) Increase 9000 by 5%
- (b) Increase 60p by 10%
- (e) Increase 32ml by 75%
- (h) Increase £7 by 20%
- (c) Increase 12g by 25%
- (f) Increase 70m by 40%
- (i) Increase 9kg by 100%

#### Question 2



- (a) Decrease 40 by 10%
- (d) Decrease 55cm by 40%
- (g) Decrease 1400 by 30%
- (b) Decrease 30 hours by 50%
- (e) Decrease 64 by 75%
- (h) Decrease 500g by 3%
- (c) Decrease 8kg by 25%
- (f) Decrease £3 by 10%
- (i) Decrease 6kg by 5%

#### Question 3



- (a) Increase 80ml by 9%
- (d) Decrease £1250 by 38%
- (g) Increase 204 by 98%
- (b) Increase 420g by 70%
- (e) Increase 6000km by 23%
- (h) Decrease 149mm by 91%
- (c) Decrease 8 by 12%
- (f) Decrease 48GB by 6%
- (i) Increase 88 by 185%

#### Question 4



- (a) Decrease 90ml by 7.5%
- (d) Increase 750cm by 0.8%
- (b) Increase £670 by 1.2%
- (c) Increase 3 by 67.4%



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## **Apply**

Question 1: Last year, there was 20 students in a class.

This year, there are 30% more students.

How many students are in the class this year?

Question 2: A TV normally costs £520.

In a sale, all prices are reduced by 10%

Calculate the sale price of the TV

Question 3: Over the past 10 years, the population of a town has increased by 25%

The population of the town 10 years ago was 18000

What is the population of the town now?

Question 4: A standard bag of flour contains 600g of flour.

A special edition bag contains 35% more flour.

How much flour is in the special edition bag?

Question 5: Richard owns a coffee shop.

In February, 4500 hot chocolates were sold.

The number of hot chocolates sold in March was 3% less.

How many hot chocolates are sold in March?

Question 6: Gabriel's salary is £24500.

Next year he is due to get a 9% increase.

What will his new salary be?

Question 7: Iris spends £40 a month on water.

By changing company, Iris can save 16%.

How much would Iris pay each month?

Question 8: An empty flowerpot has a mass of 800g.

The mass of the flowerpot increases to 4kg when filled with soil.

A different flowerpot is 25% lighter but holds 40% more soil. Calculate the mass of this flowerpot when it is full of soil.



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Question 9: Louis sees this special offer in a shop.

Louis buys both items. How much does he pay? Special Offer

**iPad** 

Buy both items and receive a 3% discount

Question 10: An adult ticket for the cinema costs £13.40

A child ticket is half the price of an adult ticket.

Mr and Mrs Henderson and their six children go to see a movie. Mrs Henderson has a voucher for 18% off.

Work out how much Mrs Henderson pays for the tickets.



Question 11: Zara wants to buy 72 candles.

Each candle costs £4.80

There is a special offer

Work out the cost of buying 72 candles using the special offer.

Special Offer

Candles £4.80 each

Buy 60 or more candles and get 15% off the total cost.

Question 12: When a tennis ball is dropped, it bounces and then rises.

The ball rises to 80% of the height from which it is dropped. The ball is dropped from a height of 4 metres.

(a) Calculate the height of the rise after the first bounce.

(b) Calculate the height of the rise after the second bounce.

The ball carries on bouncing, each time rising to 80% of the last rise.

(c) For how many bounces does the ball rise to a height greater than 10cm?

Answers





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