

Lesson 3

Percentages : Year 9

Non Calculator

3.1 Percentage decrease

Table of common fractions with percentge equivalents

$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{20}$	$\frac{1}{25}$	$\frac{1}{50}$	$\frac{1}{100}$
50%	$33\frac{1}{3}\%$	25%	20%	10%	5%	4%	2%	1%

3.2 Examples

Example 1

Decrease £480 by 25%

Example 2

Decrease £180 by 5%

Example 3

Decrease £20 by 30%

Example 4

Decrease £40 by 15%

3.3 Exercise

Question 1

Decrease £75 by 4%

Question 2

Decrease £500 by 80%

Question 3

Decrease 12 kg by 10%

Question 4

Decrease 45 cm by $66\frac{2}{3}\%$

Question 5

Decrease £20 by 70%

Question 6

Decrease £100 by 13%

Question 7

Decrease £36 by 75%

Question 8

Decrease £55 by 40%

Question 9

Decrease \$90 by 70%

Question 10

Decrease \$175 by 8%

Question 11

In a bouquet of 80 flowers, 10% are yellow, 45% are red and the rest are purple.
Find the number of flowers that are;

(i) yellow (ii) red (iii) purple

Question 12

If 15% of men are colour blind how many men would you expect to be colour blind in a crowd of 500 men ?

Question 13

In a packet of pineapple and pear flavoured sweets, for every 3 pineapple sweets there are 2 pear sweets.

What percentage of the sweets are pineapple flavoured ?

Question 14

A **summer stunner** cocktail is formed by mixing the following;

2 parts apple juice,

5 parts ginger ale,

1 part ice.

What percentage of a **summer stunner** is apple juice ?

Question 15

9 out of 15 cat owners said that their cat preferred **meusic** cat food.

(It's the food that'll make your cat sing)

What percentage of cats is this ?

Question 16

The value of an electronic resistor is guaranteed to be 60Ω plus or minus 5%.

Between what two actual values might the resistor's stated value lie ?

Question 17

£400 is placed in a savings account.

The rate of interest is 20% per annum.

If the money earned on the account is placed back into the account, how much money will there be in the account after;

(i) 1 year

(ii) 2 years

(iii) 3 years

Question 18

Write the following percentages as fractions using the hint given;

(i) 36% hint : $36\% = 9 \times 4\% = 9 \times \frac{1}{25}$

(ii) 44% hint : $44\% = 11 \times 4\%$

(iii) 28% hint : $28\% = 7 \times$

(iv) 52%