

Lesson 4

Percentages : Year 9

Non Calculator

4.1 Percentage Of

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

4.2 Examples

Example 1

What percentage of 50 kg is 30 kg ?

Example 2

What percentage of 40 marks are 6 marks ?

Example 3

What percentage of £2.80 is £2.10 ?

4.3 Exercise

Question 1

What percentage of £12 is £4 ?

Question 2

What percentage of £15 is £6 ?

Question 3

What percentage of £75 is £50 ?

Question 4

What percentage of 50 fish is 3 fish ?

Question 5

What percentage of 25 kg is 20 kg ?

Question 6

What percentage of £9.90 is £3.30 ?

Question 7

State what percentage of this sentence's letters are vowels.

Question 8

Peter gets only one question wrong in a twenty question test.
What percentage of questions has he got correct ?

Question 9

Here is a grid of prime numbers less than 100.

P	R	I	M	E	S		2	3		5		7					
L	E	S				11		13				17		19			
T	H	A	N					23						29			
1	0	0				31						37					
						41		43				47					
								53						59			
						61						67					
						71		73						79			
								83						89			
												97					

What percentage of the integers less than 100 are prime ?

Question 10

In a laboratory, 400 beefburgers are tested for horse DNA.
The tests show that 16 of the beefburgers contain horse DNA .
What percentage of the beefburgers tested contain horse DNA ?

Question 11

What percentage of \$80 is \$12 ?

Question 12

What percentage of £25 is £4 ?

Question 13

(i) Increase £50 by $\frac{1}{4}$

(ii) Increase £60 by 25%

(iii) Increase £32 by $\frac{3}{4}$

(iv) Increase £88 by 75%

Question 14

(i) Decrease £35 by $\frac{1}{5}$

(ii) Decrease £65 by 20%

(iii) Decrease £55 by $\frac{4}{5}$

(iv) Decrease £80 by 80%

Question 15

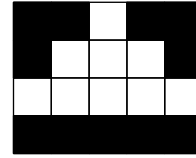
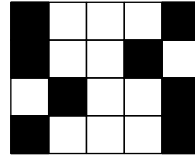
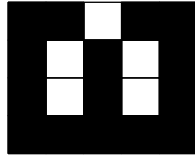
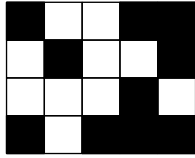
Robert spends 27% of his time sleeping, and 34% of his time working.
How much time is left for him to do something else ?

Question 16

An estate agent charges 2% commission on every house he sells.
How much commission will he earn on a house that he sells for £340 000 ?

Question 17

For each of the following shapes, state what percentage is shaded.

**Question 18**

(i) What is 5% of £60 ?

(ii) What is 15% of £60 ?

(iii) What is 55% of £60

(iv) What is 85% of £60 ?

(v) Increase £60 by 35%

(vi) Decrease £60 by 45%

Question 19

(i) What is 4% of £125 ?

(ii) What is 16% of £125 ?

(iii) What is 32% of £125

(iv) What is 96% of £125 ?

(v) Increase £125 by 44%

(vi) Decrease £125 by 92%

Question 20

(i) What is 25% of 360° ?

(ii) What is 30% of 360° ?

(iii) What is 40% of 360° ?

- In a survey,
- 25% of the people asked voted UKIP
 - 30% of the people asked voted Tory
 - 40% of the people asked voted Labour
 - The remainder voted LibDem.

(iv) In the space below draw an accurate Pie Chart to represent this information.

(v) What percentage of people voted LibDem ?

(vi) How many degrees is this on the Pie Chart ?