

Fractions, Decimals & Percentages



Outcome 1 - Fractions → Decimals → Percentages

Examples...

Fraction	Decimal	Percentage
$\frac{17}{100}$	0.17	17%
$\frac{3}{100}$	0.03	3%
$\frac{49}{100}$	0.49	49%

Rule 1 - To change a fraction into a decimal... do the division.

Rule 2 - To change a decimal into a percentage... multiply by 100.

Rule 3 - To change a percentage into a fraction... put the percentage over 100.



Questions...

Express the following as a fraction, decimal and percentage...

$\frac{41}{100}$	?	?	?	0.73	?
?	?	97%	$\frac{61}{100}$	?	?
?	0.13	?	?	?	47%
$\frac{53}{100}$	?	?	?	0.19	?
?	?	7%	$\frac{31}{100}$	?	?

Outcome 2 - The fraction of a quantity

Examples...

****When the numerator is 1...just divide by the bottom!****

$$\frac{1}{3} \text{ of } 18 = 18 \div 3 = 6$$

$$\frac{1}{4} \text{ of } 36 = 36 \div 4 = 9$$

$$\frac{1}{7} \text{ of } 49 = 49 \div 7 = 7$$

Questions...

Work out the following fractions...

$\frac{1}{2}$ of 8	$\frac{1}{3}$ of 24
$\frac{1}{4}$ of 32	$\frac{1}{5}$ of 45
$\frac{1}{6}$ of 24	$\frac{1}{10}$ of 30
$\frac{1}{8}$ of 40	$\frac{1}{7}$ of 63
$\frac{1}{6}$ of 60	$\frac{1}{9}$ of 54

Outcome 3 - Calculating mental percentages

Examples...

****Ask yourself... "how many times does my percentage go into 100?"****

$$50\% \text{ of } 14 = \frac{1}{2} \text{ of } 14 = 7$$

$$25\% \text{ of } 24 = \frac{1}{4} \text{ of } 24 = 6$$

$$33\frac{1}{3}\% \text{ of } 21 = \frac{1}{3} \text{ of } 21 = 7$$

$$20\% \text{ of } 40 = \frac{1}{5} \text{ of } 40 = 8$$

$$10\% \text{ of } 90 = \frac{1}{10} \text{ of } 90 = 9$$

Questions...

Work out the following percentages... without a calculator!

50% of 24	25% of 28
10% of 60	20% of 45
$33\frac{1}{3}\%$ of 18	25% of 36
10% of 30	$33\frac{1}{3}\%$ of 27
25% of 8	1% of 700

Outcome 1 Answers

- | | |
|--------------------|---------------------|
| 1. 41/100 0.41 41% | 2. 73/100 0.73 73% |
| 3. 97/100 0.97 97% | 4. 61/100 0.61 61% |
| 5. 13/100 0.13 13% | 6. 47/100 0.47 47% |
| 7. 53/100 0.53 53% | 8. 19/100 0.19 19% |
| 9. 7/100 0.07 7% | 10. 31/100 0.31 31% |

Outcome 2 Answers

- | | |
|-------|-------|
| 1. 4 | 2. 8 |
| 3. 8 | 4. 9 |
| 5. 4 | 6. 3 |
| 7. 5 | 8. 9 |
| 9. 10 | 10. 6 |

Outcome 3 Answers

- | | |
|-------|-------|
| 1. 12 | 2. 7 |
| 3. 6 | 4. 9 |
| 5. 6 | 6. 9 |
| 7. 3 | 8. 9 |
| 9. 2 | 10. 7 |