

BASIC USE OF PERCENTAGESEXERCISE

1. Draw and complete the following table to show equivalent fractions, percentages and decimals.

Fractions	Percentages	Decimals
1	100%	1.00
$\frac{1}{2}$	50%	0.50
	20%	
$\frac{2}{5}$		0.43
	6%	
$\frac{1}{3}$		0.55
	110%	
$\frac{3}{4}$		0.80
	15%	

2. Non-Calculator

- a) Find 10% of 44 kg
 b) Find 5% of £32
 c) Find 20% of £18
 d) Find 75% of 26m

Calculator

- e) Find 17% of 62 m
 f) Find 83% of £83
 g) Find 4% of 815 kg
 h) Find 123% of 75m

BASIC USE OF PERCENTAGESEXERCISE

3. a) Increase £52 by 11% e) Decrease £43 by 27%
b) Decrease £93 by 14% f) Increase 30m by 125%
c) Increase 77 kg by 7% g) Decrease 85 kg by 1%
d) Increase 125m by 3% h) Decrease £2500 by 42%
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4. a) Express 16 as a percentage of 20
b) Express 37 as a percentage of 83
c) A sack contains 82 balls. 53 are red and the rest are blue. What percentage of the balls are red and what percentage are blue?
d) 772 people take a driving test and 443 pass the test. What percentage of people pass and what percentage of people fail?

BASIC USE OF PERCENTAGES

EXERCISE

<u>Fractions</u>	<u>Percentages</u>	<u>Decimals</u>
1	100%	1.00
$\frac{1}{2}$	50%	0.50
$\frac{2}{10}$ or $\frac{1}{5}$	20%	0.20
$\frac{2}{5}$	40%	0.40
$\frac{43}{100}$	43%	0.43
$\frac{6}{100}$ or $\frac{3}{50}$	6%	0.06
$\frac{1}{3}$	$33\frac{1}{3}\%$	0.33
$\frac{55}{100}$ or $\frac{11}{20}$	55%	0.55
$\frac{110}{100}$ or $\frac{11}{10}$	110%	1.10
$\frac{3}{4}$	75%	0.75
$\frac{80}{100}$ or $\frac{4}{5}$	80%	0.80
$\frac{15}{100}$ or $\frac{3}{20}$	15%	0.15

2. a) 10% of 44 kg
= 4.4 kg

b) 5% of £32
10% = £3.20
⇒ 5% = £1.60

c) 20% of £18
10% = £1.80
⇒ 20% = £3.60

d) 75% of 26 m
50% = 13 m
25% = 6.5 m
⇒ 75% = 19.5 m

BASIC USE OF PERCENTAGESEXERCISE2
cont)

$$e) \quad 17\% \text{ of } 62\text{m}$$

$$62\text{m} \times 0.17 = 10.54\text{m}$$

$$f) \quad 83\% \text{ of } \pounds 83$$

$$\pounds 83 \times 0.83 = \pounds 68.89$$

$$g) \quad 4\% \text{ of } 815\text{kg}$$

$$815\text{kg} \times 0.04 = 32.6\text{kg}$$

$$h) \quad 123\% \text{ of } 75\text{m}$$

$$75\text{m} \times 1.23 = 92.25\text{m}$$

$$3. a) \quad \pounds 52 \times 0.11 = \pounds 5.72$$

$$\pounds 52 + \pounds 5.72 = \pounds 57.72$$

$$b) \quad \pounds 93 \times 0.14 = \pounds 13.02$$

$$\pounds 93 - \pounds 13.02 = \pounds 79.98$$

$$c) \quad 77\text{kg} \times 0.07 = 5.39\text{kg}$$

$$77\text{kg} + 5.39\text{kg} = 82.39\text{kg}$$

$$d) \quad 125\text{m} \times 0.03 = 3.75\text{m}$$

$$125\text{m} + 3.75\text{m} = 128.75\text{m}$$

$$e) \quad \pounds 43 \times 0.27 = \pounds 11.61$$

$$\pounds 43 - \pounds 11.61 = \pounds 31.39$$

$$f) \quad 30\text{m} \times 1.25 = 37.5\text{m}$$

$$30\text{m} + 37.5\text{m} = 67.5\text{m}$$

$$g) \quad 85\text{kg} \times 0.01 = 0.85\text{kg}$$

$$85\text{kg} - 0.85\text{kg} = 84.15\text{kg}$$

$$h) \quad \pounds 2500 \times 0.42 = \pounds 1050$$

$$\pounds 2500 - \pounds 1050 = \pounds 1450$$

4. a) Express 16 as a percentage of 20

$$= \frac{16}{20} \times 100$$

$$= \frac{16}{\cancel{20}^1} \times \cancel{100}^5 = 16 \times 5 = 80\%$$

BASIC USE OF PERCENTAGESEXERCISE4)
cont/

b) Express 37 as a percentage of 83

$$= \frac{37}{83} \times 100 = 44.6\%$$

c) 82 balls, 53 red

$$\text{Percentage of red} = \frac{53}{82} \times 100 = 64.6\%$$

$$\text{Percentage of blue} = 100\% - 64.6\% = 35.4\%$$

d) 772 people, 443 pass

$$\text{Percentage that pass} = \frac{443}{772} \times 100 = 57.4\%$$

$$\text{Percentage that fail} = 100\% - 57.4\% = 42.6\%$$

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