

Per cent means "out of 100"

PERCENT TO FRACTION: divide by 100 and simplify

$$38\% = \frac{38}{100} \div 2 = \frac{19}{50} \quad 27.5\% = \frac{27.5}{100} \times 10 = \frac{275}{1000} \div 25 = \frac{11}{40}$$

FRACTION TO DECIMAL: use a calculator and divide

$$1/4 = 1 \div 4 = 0.25$$

DECIMAL TO PERCENT: multiply by 100 (move the decimal 2 places to the right)

$$0.10 = 10\%$$

$$0.673 = 67.3\%$$

DECIMAL TO FRACTION: make the place value of the final digit the denominator

$$0.26 = \frac{26}{100} \div 2 = \frac{13}{50} \quad 0.567 = \frac{567}{1000} \quad 1.5 = \frac{15}{10}$$

$$0.0001 = 0.01\%$$

$$0.0025 = 0.25\%$$

$$0.001 = 0.1\%$$

$$0.025 = 2.5\%$$

$$0.01 = 1\%$$

$$0.25 = 25\%$$

$$0.1 = 10\%$$

$$2.5 = 250\%$$

$$0.10 = 10\%$$

Example 1

Write each percent as a fraction and as a decimal.

a) 7%

$$\frac{7}{100}$$

$$0.07$$

b) 7.75%

$$\frac{7.75}{100} = \frac{775}{10000} = \frac{31}{400}$$

$$0.0775$$

c) $7\frac{1}{4}\%$

$$\frac{1}{4} = 0.25$$

$$7.25\% = \frac{7.25}{100} = \frac{725}{10000} = \frac{29}{400}$$

$$0.0725$$

Example 2

Write each fraction as a decimal and as a percent.

a) $\frac{5}{8}$

$$0.625$$

$$62.5\%$$

b) $\frac{5}{6}$

$$0.8\bar{3}$$

$$83.\bar{3}\%$$

c) $\frac{5}{1000}$

$$0.005$$

$$0.5\%$$