

ch. Percentage

1) Express each of the following statements in percentage form:

1) 13 out of 20

$$\Rightarrow \frac{13}{20} \times 100 = 65\%$$

ii) 21 eggs out of 30 eggs are good.

$$\Rightarrow \frac{21}{30} \times 100 = 70\%$$

2) Express the following fractions as percent:

$$\Rightarrow \frac{3}{200} = \frac{3}{200} \times 100 = \frac{3}{2} = 1.5\%$$

$$2) \overline{) 3} \quad (1.5$$

$$\underline{-2}$$

$$10$$

$$\underline{-10}$$

$$0$$

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

$$\Rightarrow \frac{5}{63} \times 100^{50} = \frac{5 \times 50}{3} = \frac{250}{3} \%$$

$$\begin{array}{r} 3 \overline{) 250} (83 \\ -24 \downarrow \\ 10 \\ -9 \\ \hline 1 \end{array}$$

$$83 \frac{1}{3} \%$$

$$iii) \frac{65}{80}$$

$$\Rightarrow \frac{65 \times 20}{80 \times 20} = \frac{1300}{100} = 1300\%$$

$$\Rightarrow \frac{65}{80} \times 100^5 = \frac{65 \times 5}{4} = \frac{325}{4} = 81 \frac{1}{4} \%$$

$$\begin{array}{r} 4 \overline{) 325} (81 \\ -32 \downarrow \\ 05 \\ -4 \\ \hline 1 \end{array}$$

$$81.25\%$$

$$iv) \frac{21}{3} \times 100^{50} = \frac{21 \times 50}{3} = \frac{1050}{3} = 350\%$$

$$\begin{array}{r} 3 \overline{) 1050} (350 \\ -9 \downarrow \\ 20 \\ -18 \\ \hline 2 \end{array}$$

3) Express as percent:

$$\rightarrow 0.10$$

$$\Rightarrow \frac{10}{100} = 10\%$$

$$ii) 0.02$$

$$\Rightarrow \frac{2}{100} = 2\%$$

$$iii) 0.7$$

$$\Rightarrow \frac{7 \times 10}{10 \times 10} = \frac{70}{100} = 70\%$$

$$iv) 0.15$$

$$\Rightarrow \frac{15}{100} = 15\%$$

$$\Rightarrow 0.032$$

16

$$\Rightarrow \frac{32}{1000} \times 100 = \frac{16}{5} = 3.2\%$$

$$\begin{array}{r} 5 \overline{) 16} \text{ (3.2} \\ \underline{-15} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

4) Convert into fractions in their lowest terms:

i) 2%

$$\Rightarrow \frac{2}{100} = \frac{1}{50}$$

ii) 20%

$$\Rightarrow \frac{20}{100} = \frac{1}{5}$$

iii) 85%

$$\Rightarrow \frac{85}{100} = \frac{17}{20}$$

iv) 250%

$$\Rightarrow \frac{250}{100} = \frac{5}{2}$$

v) $12\frac{1}{2}\%$

~~$\Rightarrow \frac{25}{2} \% = \frac{25}{2} \times \frac{100}{100} = \frac{2500}{2} = 1250$~~

$$\Rightarrow \frac{25}{2} \% = \frac{25}{2} \times \frac{1}{100} = \frac{25}{200} = \frac{1}{8}$$

5) Express as decimal fractions:

$$\Rightarrow 25\%$$

$$\Rightarrow \frac{25}{100} = 0.25$$

$$ii) \frac{108}{100} = 1.08\%$$

$$\Rightarrow \frac{108}{100} = 1.08$$

$$iii) 95\%$$

$$\Rightarrow \frac{95}{100} = 0.95$$

$$iv) 4.5\%$$

$$\Rightarrow \frac{4.5}{100 \times 10} = \frac{45}{1000} = 0.045$$

$$v) 29.2\%$$

$$\Rightarrow \frac{292}{100 \times 10} = \frac{292}{1000} = 0.292$$

6) Express each of the following nos as percent

$$i) 7$$

$$\Rightarrow 7 \times 100 = 700\%$$

ii) 2.

$$\Rightarrow 2 \times 100 = 200\%$$

iii) 19.5

$$\Rightarrow 19.5 \times 100 = 1950.0 = 1950\%$$

iv) 5.37

$$\Rightarrow 5.37 \times 100 = 537\%$$