

Percents – Decimals - Fractions

Vocabulary

Percent	Means “for each hundred”
Percent sign, %	Read “out of each 100”

Examples – using percent notation

$$25 \text{ out of } 100 \rightarrow \frac{25}{100} \rightarrow 25\%$$

$$35 \text{ out of } 50 \rightarrow \frac{35}{50} = \frac{70}{100} \rightarrow 70\%$$

TRY:

$$15 \text{ out of } 100 \rightarrow$$

$$13 \text{ out of } 25 \rightarrow$$

Examples – changing a percent to a fraction

$$9\% \rightarrow \frac{9}{100}$$

$$80\% \rightarrow \frac{80}{100} = \frac{4}{5}$$

TRY:

$$21\%$$

$$75\%$$

Examples – changing a percent to a mixed number

$$140\% \rightarrow \frac{140}{100} = \frac{14}{10} = \frac{7}{5} = 1\frac{2}{5}$$

$$33\frac{1}{3}\% \rightarrow \frac{33\frac{1}{3}}{100} = \frac{\frac{100}{3}}{100} = \frac{100}{3} \cdot \frac{1}{100} = \frac{1}{3}$$

TRY:

$$275\% \rightarrow$$

$$66\frac{2}{3}\% \rightarrow$$

Examples – changing a percent to a decimal equivalent

$$80\% \rightarrow \frac{80}{100} \rightarrow .80 \text{ or } .8$$

$$9\% \rightarrow \frac{9}{100} \rightarrow .09$$

TRY:

$$30\% \rightarrow$$

$$3\% \rightarrow$$

This is the same as moving the decimal point (understood or shown) in the percent to the left 2 places.

$$145\% \rightarrow 1.45$$

$$425\% \rightarrow$$

$$0.55\% \rightarrow 0.0055$$

(Careful – this is less than 1%,
so the decimal should be less than 1/100)

$$0.075\% \rightarrow$$

Examples – various conversions

$$5\frac{3}{4} \rightarrow \frac{23}{4} = \frac{575}{100} \rightarrow 575\% \rightarrow 5.75$$

Move the decimal 2 places to the right to change from decimal to %.

$$0.065 \rightarrow \frac{65}{1000} \rightarrow \frac{6.5}{100} \rightarrow 6.5\%$$

$$0.007 \rightarrow 0.7\% \text{ or } \frac{7}{10}\%$$

TRY:

Write as fractions or mixed number:

1. 2%
2. 37.5 %
3. 150%

Write as a decimal

1. 75%
2. 6.25%
3. 225%

Write as a percent

1. 0.06
2. 0.375
3. 2.4

Write as a percent

1. $\frac{43}{100}$
2. $\frac{2}{5}$
3. $2\frac{2}{3}$