

2.4: DECIMAL, PERCENT, & FRACTIONS

DECIMAL AND PERCENT CONVERSIONS

- "PERCENT" means "out of 100".
- TO CONVERT FROM A DECIMAL TO A PERCENT, MOVE THE DECIMAL POINT TWO PLACES TO THE RIGHT.
 - $0.35 \rightarrow 35\%$
 - $1.15 \rightarrow 115\%$
 - $0.04 \rightarrow 4\%$
 - $0.0833 \rightarrow 8.\overline{33}\% \text{ OR } 8\frac{1}{3}\%$

DECIMAL AND PERCENT CONVERSIONS

- TO CONVERT FROM A PERCENT TO A DECIMAL, MOVE THE DECIMAL POINT TWO PLACES TO THE LEFT.
 - $65\% \rightarrow 0.65$
 - $3\% \rightarrow 0.03$
 - $125\% \rightarrow 1.25$
 - $0.7\% \rightarrow 0.007$

Convert each percent to a decimal:

• 1) 67%

2) 3%

• 3) $6\frac{1}{2}\%$

4) 120%

• 5) $14\frac{3}{4}\%$

6) $3\frac{1}{8}\%$

• 7) $5\frac{1}{4}\%$

8) $7\frac{1}{3}\%$

• 9) 18%

10) 500%

CONVERT EACH DECIMAL TO A PERCENT:

• 11) 0.56

12) 0.9

• 13) 0.135

14) 0.008

• 15) 0.075

16) 1.35

• 17) 6

18) 0.03125

• 19) $0.12\overline{33}$

20) $0.45\overline{88}$

CONVERTING DECIMALS TO FRACTIONS

- IN ORDER TO CONVERT A DECIMAL TO ITS FRACTION EQUIVALENT, FOLLOW THESE THREE STEPS:
 - 1) READ it,
 - 2) WRITE it,
 - 3) REDUCE it.

FOR EXAMPLE:

- CONVERT 0.84 to a fraction:
 - 1) READ it: "eighty-four hundredths"
 - 2) WRITE it: $\frac{84}{100}$
 - 3) REDUCE it: $\frac{84}{100} = \frac{21}{25}$ *SIMPLEST FORM*

CONVERT each of the following to a fraction:

• 1) 0.7

6) 0.016

• 2) 0.56

7) 0.125

• 3) 0.004

8) 0.0015

• 4) 0.155

9) 0.086

• 5) 0.45

CONVERTING FRACTIONS TO PERCENT:

- TO CONVERT A FRACTION TO A PERCENT:
 - 1) **Divide** (fraction to decimal)
 - 2) **Move the decimal** point two places to the right (decimal to percent)

FOR EXAMPLE:

- CONVERT $7/25$ TO A PERCENT:

$$\bullet \frac{7}{25} = 0.28 = 28\%$$

$$\bullet \frac{7}{25} = \frac{28}{100}$$

CONVERT THE FOLLOWING FRACTIONS TO A PERCENT:

- $\frac{13}{20}$

- $\frac{1}{12}$

- $\frac{4}{15}$

- $1 \frac{1}{5}$

- $3 \frac{1}{15}$

Fraction to Percent: Rounded to the tenth

- (1) FOLLOW RULES FOR CONVERTING FRACTIONS TO DECIMALS (DIVIDE).
- RECALL:
 - TO ROUND A DECIMAL TO THE TENTHS PLACE, YOU MUST HAVE A DIGIT IN THE HUNDRETHS PLACE. HOWEVER, YOU MUST ALSO TAKE INTO ACCOUNT THE FACT THAT YOU WILL BE MOVING THE DECIMAL POINT AFTER DIVIDING. THE PERCENT IS ROUNDED AFTER THE DECIMAL POINT IS MOVED.

THEREFORE...

- (2) Divide to the ten-thousandths place.
- (3) Move the decimal point two places to the right.
- (4) Round the resulting percent to the tenths place

EXAMPLE:

- EXPRESS each as a PERCENT ROUNDED to the tenths PLACE:

- $\frac{2}{3}$

MORE EXAMPLES:

$$\dot{\frac{5}{9}}$$

$$\dot{\frac{1}{7}}$$

MORE...

$$\bullet \frac{5}{11}$$

$$\bullet \frac{1}{16}$$

CONVERTING PERCENTS TO FRACTIONS

- RECALL: PERCENT means “out of 100”
- SO When CONVERTING a PERCENT to a FRACTION, PUT the PERCENT OVER 100 and then SIMPLIFY
- EXAMPLE: 29% means “29 out of 100” SO $\frac{29}{100}$ is the fraction equivalent.

EXAMPLES

- 18%

- 85%

- 320%

- 115%

- $33\frac{1}{3}\%$

10.3%

0.4%

6.5%

$\frac{1}{4}\%$

$3\frac{1}{2}\%$