

## Concept: Percents... Fractions... Decimals

Name:

### COMPUTER COMPONENT

**Instructions:** In  follow the **Content Menu** path:

**Fractions > Percents... Fractions... Decimals**

 Work through all Sub Lessons of the following Lessons **in order**:

- *Expressing a Percent as a Fraction*
- *Expressing a Percent as a Decimal*
- *Number Line #1*
- *Decimal Strips*
- *Expressing a Decimal as a Percent*
- *Expressing a Fraction as a Percent*
- *Number Line #2*
- *Chart*
- *Order Fractions, Decimals and Percents*



As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

### NOTES

1. *Fill in the blanks and ‘circle’ the correct response.*

Percent means per CENTUM which means per 100.

What does GCF stand for? Greatest Common Factor.

The GCF for 24 and 36 is ... 4, 6, 8 or 12 (*Circle one*)

The GCF for 42 and 54 is 6.

2. *When converting Percent to Fractions, your percentage is always out of 100.*

*Example:* 50 % means 50 per 100

$$\therefore 50 \% = \frac{50}{100}$$

**You try:**

(a) Express 40% as a fraction.

40% means 40 per 100

$$\therefore 40\% = \frac{40}{100}$$

(b) Express 95% as a fraction.

95% means 95 per 100

$$\therefore 95\% = \frac{95}{100}$$

(c) Express 15% as a fraction.

15% means 15 per 100

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

**3. To express a Percent as a Decimal, we need to divide by 100.**

*We can achieve this in two ways:*

We can simply move the decimal place 2 to units to the left.

**OR**

We can calculate the decimal by dividing the percent by 100 in a long- division question.

*Convert the following percents to decimals. (Try both methods for the first two and use the strategy you prefer for the remaining two)*

(a) 75%

Method 1

Method 2

$$75\% = 0.75$$

*(decimal moved two places left)*

$$100 \overline{)75\%} \begin{array}{r} 0.75 \\ \end{array}$$

(b) 26%

Method 2
Method 2

$26\% = 0.26$   
 (decimal moved two places left)

$$\begin{array}{r} 0.26 \\ 100 \overline{)26\%} \end{array}$$

(c) 58%

0.58

(d) 99%

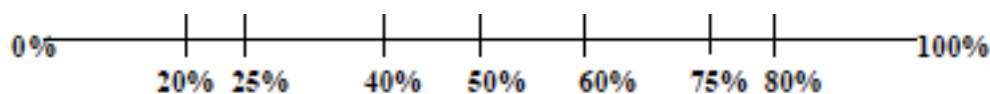
0.99

 (e) Which method do you prefer? Why? (*Responses will vary*)

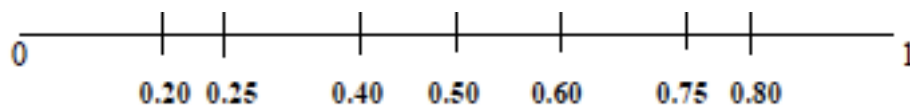
Number lines can give you a visual representation of the direct comparison between Percents, Decimals and Fractions.

4. Fill in the following number lines by using the computer to help you.

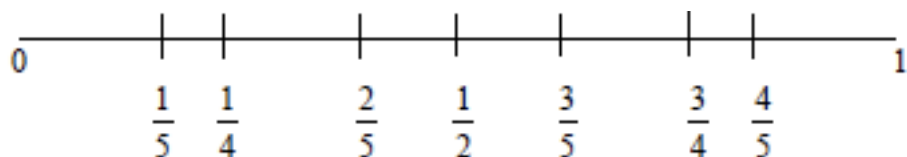
Percent Representation



Decimal Representation



Fraction Representation



5. When expressing a decimal as a percent, we need to multiply by 100.

We can achieve this in two ways:

We can simply move the decimal place 2 units to the right.

**OR**

We can calculate the percent by multiplying the decimal by 100 in a multiplication question.

Convert the following decimals to percents. (Try both methods for the first two and use the strategy you prefer for the remaining two)

(a) 0.87

Method 1

$$0.87 = 87\%$$

(decimal moved two places right)

Method 2

$$0.87 \times 100 = 87\%$$

(b) 0.25

Method 1

$$0.25 = 25\%$$

(decimal moved two places right)

Method 2

$$0.25 \times 100 = 25\%$$

(c) 0.90

90%

(d) 0.53

53%

(e) Which method do you prefer? Why? (*Responses will vary*)

6. *There are two methods we can use when expressing a Fraction as a Percent*

(use the computer to help you here)

Method 1:  $\frac{11}{20}$

$$\frac{11}{20} \times \frac{5}{5} = \frac{55}{100}$$

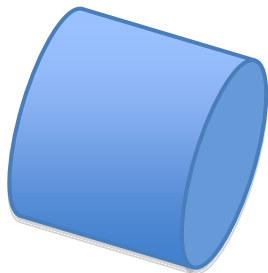
$$\frac{55}{100} = 55\%$$

Method 2:  $\frac{11}{20}$

$$20 \overline{) 11.00} \begin{array}{r} .55 \\ \underline{11.00} \\ 0 \end{array}$$

$$\frac{11}{20} = 0.55 = 55\%$$

7. *Percent, Fraction and Decimal tiles have been poured out of this cup.*



$$\frac{4}{10}$$

$$94\%$$

$$0.27$$

$$\frac{3}{5}$$

$$64\%$$

$$0.45$$

Arrange these values from Largest to Smallest. *You may use your number lines to assist you.*

94% , 64 % ,  $\frac{3}{5}$  , 0.45,  $\frac{4}{10}$  , 0.27

### OFF COMPUTER EXERCISES

1. Fill in the missing values in the chart.

Fraction	Decimal	Percent
$\frac{4}{5}$	<b>0.80</b>	<b>80%</b>
$\frac{9}{20}$	<b>0.45</b>	45 %
$\frac{91}{100}$	0.91	<b>91%</b>
$\frac{295}{1000}$	0.295	<b>29.5%</b>
$\frac{1}{10}$	<b>0.10</b>	<b>10%</b>
<b>1</b>	<b>1.00</b>	100 %
$\frac{24}{25}$	<b>0.96</b>	<b>96%</b>
$\frac{17}{20}$	0.85	<b>85%</b>

2. Tiffany earns \$100 a week. She spends \$15 each week on movie rentals.  
*What percentage of Tiffany's weekly pay is spent on renting movies?*

**15%**

3. In a college class of 100 students, 18 % of the students were absent.  
*Express the number of absences as a fraction.*

$\frac{18}{100}$

4. Of the 28 people on the school soccer team, 16 of the players have brown eyes.

(a) Express this number as a percent.

**57%**

(b) Express this number as a decimal.

**0.51**

5. Sam has 22 hours of spare time each week. He spends 9.5 hours of that each week playing video games.

(a) Express that number as a fraction (hint: use an equivalent fraction).

**$\frac{19}{44}$**

(b) Express that number as a decimal.

**43%**