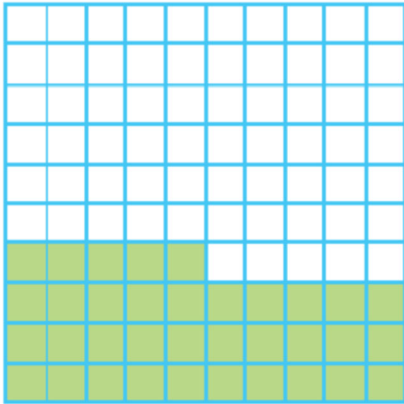


Name: \_\_\_\_\_

Date: \_\_\_\_\_

<b>Learning Goal 3.1</b>	I can convert between percentages, decimal and fractions.
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What percent is represented by the shaded squares?

35%

What fraction represents the number of shaded squares?

$$\frac{35 \div 5}{100 \div 5} = \frac{7}{20}$$

What is the decimal value represented by the shaded squares?

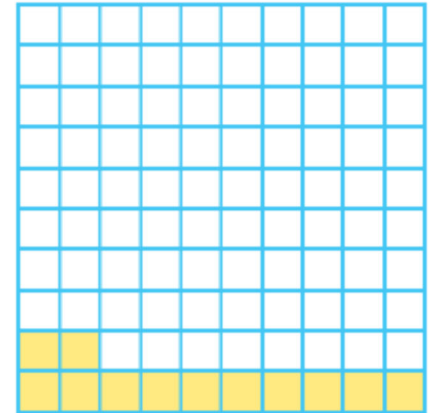
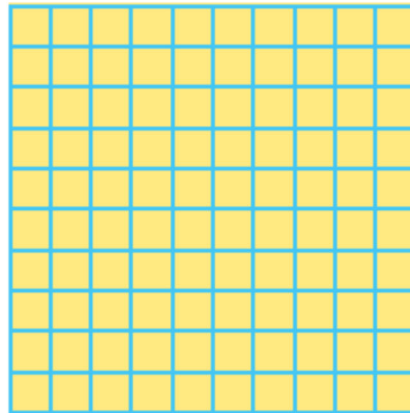
35      0.35

What percent is represented by the shaded squares?

112%

What fraction represents the number of shaded squares?

$$\frac{112 \div 4}{100 \div 4} = \frac{28}{25}$$



What is the decimal value represented by the shaded squares?

112%      1.12

**Converting Percentages to Decimals and Fractions**

- to decimal - divide the percent by 100, by moving the decimal point 2 spaces to the left
- to fraction - percent becomes the numerator, 100 is the denominator, simplify if possible

$$\frac{9 \times 12.5}{8 \times 12.6} = \frac{112.5}{100}$$

$$\begin{array}{r} 1.125 \\ 8 \overline{) 9.000} \\ \underline{-8} \phantom{00} \\ 10 \phantom{0} \\ \underline{-8} \phantom{0} \\ 20 \\ \underline{-16} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

**Example** Convert each fraction to a decimal and a percent.

a.  $\frac{1 \times 5}{20 \times 5} = \frac{5}{100} = 5\%$   
 $= 0.05$

b.  $\frac{71 \div 2}{200 \div 2} = \frac{35.5}{100}$   
 $= 35.5\%$   
 $= 0.355$

c.  $\frac{9}{8} = \frac{1.125 \times 100}{1 \times 100}$   
 $= \frac{112.5}{100}$   
 $= 112.5\%$

**Converting fractions to Percentages and Decimals**

- Find an equivalent fraction whose denominator is 100 - the numerator is the percent.
- use the percent answer to find the decimal.

\* if the denominator does not play nicely with 100, use long division to find the decimal, then

**Example** Convert each decimal to a fraction and a percent.

a.  $\frac{0.0032 \times 100}{1 \times 100} = \frac{0.32}{100}$   
 $= 0.32\%$

b.  $\frac{0.125 \times 100}{1 \times 100} = \frac{12.5}{100}$   
 $= 12.5\%$

c.  $\frac{3.26 \times 100}{1 \times 100}$  the percent  
 $= \frac{326 \div 2}{100 \div 2} = 326\%$

$\frac{0.32 \times 100}{100 \times 100} = \frac{32 \div 2}{10000 \div 2}$   
 $= \frac{16 \div 2}{5000 \div 2}$   
 $= \frac{8 \div 2}{2500 \div 2} = \frac{4 \div 2}{1250 \div 2} = \frac{2}{625}$

$\frac{12.5 \times 10}{100 \times 10} = \frac{125 \div 25}{1000 \div 25}$   
 $= \frac{5 \div 5}{40 \div 5}$   
 $= \frac{1}{8}$

$= \frac{163}{50}$

**Converting decimals to Fractions and Percents.**

- Since the denominator is one, multiply top and bottom by 100 - the numerator is now the percent.
- use the fraction you found, simplifying if necessary.

**Example** Convert each percent to a decimal and a fraction.

a.  $160\% = 1.60$  NC  
 $= \frac{16}{10}$   
 $= \frac{8}{5}$

b.  $0.35\% = 0.0035$  NC  
 $\frac{35}{10000} = \frac{7}{2000}$

c.  $25\frac{3}{5}\% = 25.6\%$  calc.  
 $= 0.256$   
 $= \frac{256}{1000} = \frac{128}{500} = \frac{64}{250} = \frac{32}{125}$