

## 4.1 Representing Percents

Can you think of places in "real life" where we use percents?

- Sales / discounts
- income tax / sales tax
- nutritional information

Where do you think the word Percent comes from, and what does it mean?

per cent  
 ^  
 for every/out of 100

Percent can be represented in a variety of different ways. Can you think of them?

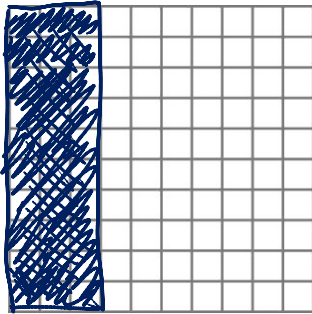
50%       $\frac{50}{100}$       0.5  
                   $\frac{1}{2}$

Barrington received 45 out of 50 on his recent math test. Please represent his test percentage in three different ways.

$$\frac{45}{50} \xrightarrow{\times 2} \frac{90}{100} \rightarrow 90\%$$

$$\frac{90}{100} \rightarrow 0.9$$

Try and represent 30% on the grid below?

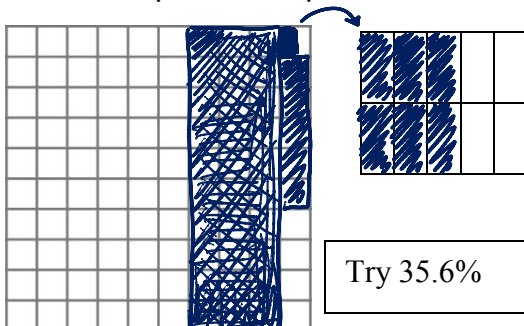


30% means you divide something into 100 pieces and take 30.

Is there any way to represent a percent like 120% on a graph similar to the one above?

you fill one entire grid, and then need to borrow 20 boxes from another grid

How can we represent a percent between 0 and 1? This is called a fractional percent.

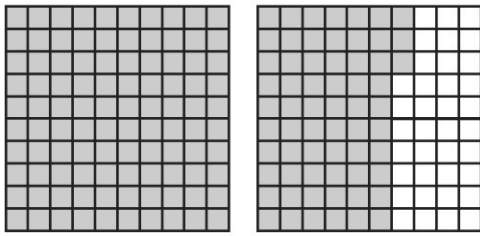


Try 35.6%

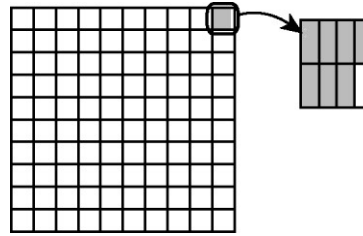
$$35.6\% = 35 \frac{6}{10}\%$$

## Example 1

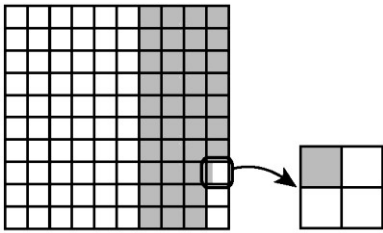
What percentage is represented by the following charts?



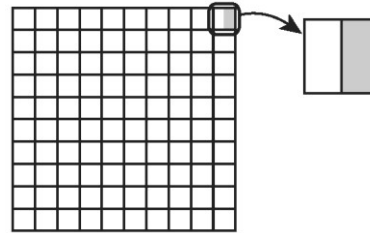
163 %



$\frac{7}{8}$  %



$37\frac{1}{4}$  %

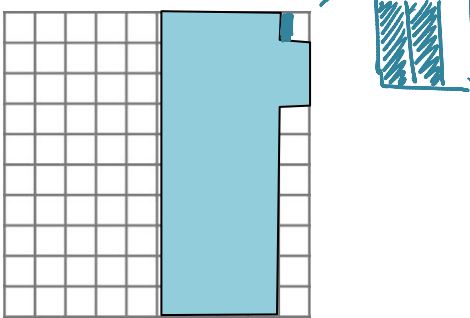


$\frac{1}{2}$  %

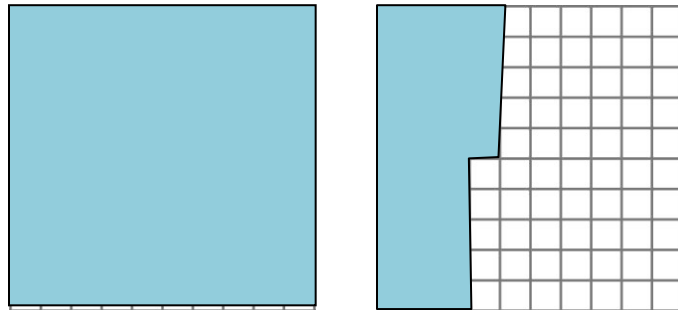
## Example 2

Use the graphs below to represent the indicated percent.

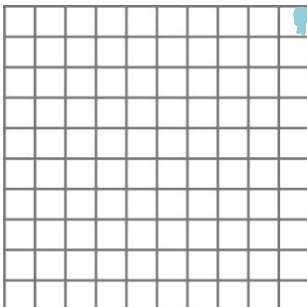
$42\frac{2}{3}\%$



135%



0.3% of Earth's fresh water is found in lakes and rivers.



HW p128  
# 4, 6, 9-14