

Grade 6 Warm Up

Date: _____

1. $6 \times 3 = 18$

2. $6 \times 7 = 42$

3. $6 \times 1 = 6$

4. $6 \times 12 = 72$

5. $6 \times 5 = 30$

6. $6 \times 9 = 54$

7. $6 \times 2 = 12$

8. $6 \times 10 = 60$

9. $6 \times 8 = 48$

10. $6 \times 4 = 24$

11. $6 \times 6 = 36$

12. $6 \times 11 = 66$

We have learned that in order to write a ratio as a fraction then the second term MUST represent a TOTAL.

Fractions \longrightarrow # of interest
TOTAL

Fractions represents a PART to WHOLE Ratio

Ex) 20 people show up for band practice. If 7 of the people play guitar, 2 play piano, 6 play flute, 4 play bass and 1 plays the drums. What fraction of the band plays the bass?

Total = 20 Drums = 1

Guitar = 7
Piano = 2
Flute = 6
Bass = 4

$$\frac{4}{20} \div 4$$

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

$$\frac{4}{20} \div 4$$

$$\frac{20}{20} \div 4$$

Students took a survey to determine which hike they would like to take at the end of the year. Each student could only choose one place. The chart below are the results/

①
②
③
④

Hike	Number of Students
Camel's End Coulee Hike	21
Centrosaurus Bone Bed Hike	24
Great Badlands Hike	33
Fossil Safari Hike	22



a) How many students are in the group? (Show work on how you know)

$$\begin{array}{r} 21 \\ 24 \\ 33 \\ + 22 \\ \hline 100 \end{array}$$

b) What fraction of students chose each hike?

① $\frac{21}{100}$

② $\frac{24}{100}$

③ $\frac{33}{100}$

④ $\frac{22}{100}$

c) What fraction of students did not choose the great Badlands hike? Show work on how you found out.

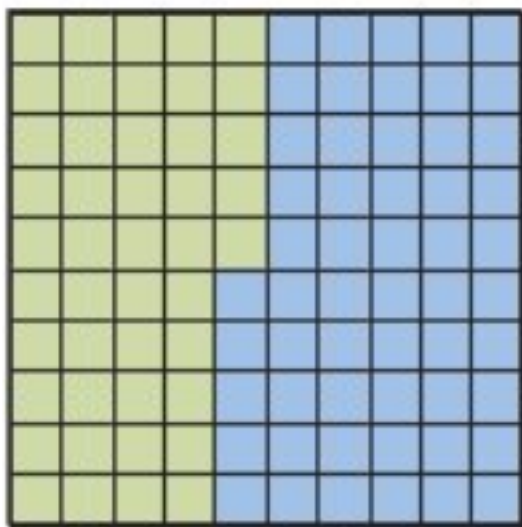
Students that did not → $\frac{33}{100}$

$100 - 33$

$\frac{67}{100}$ did not choose this hike

Connect

The hundredths grid represents 1 whole.



Here are 4 ways to describe the green part of the grid.

- Compare the number of green squares to the total number of squares:
45 out of 100 squares are green
- Write a fraction.
 $\frac{45}{100}$ of the grid is green.

Percent

Percent is a special ratio, where the second term is always 100.

Ex) 80% is often referred to as 80 out of 100.

You can easily write a percent as a fraction, decimal or number.

~~MUST STUDY THE FOLLOWING~~

~~Percent to Fraction → Put the percent over 100 and reduce~~

Ex) 80% as a fraction is

$$\begin{array}{l} 80 \quad 100 \\ 1 \times 80 \quad 100 \times 1 \\ 2 \times 40 \quad 2 \times 50 \\ 4 \times 20 \quad 4 \times 25 \\ 5 \times 16 \quad 5 \times 20 \\ 8 \times 10 \quad 10 \times 10 \end{array}$$

$$\frac{80}{100} \div 20 = \frac{4}{5}$$

Ex)
80% as a decimal

To take a percent to a decimal you divide by

You try

Write the following as a percent

a) 32 out of 100

$$\frac{32}{100} = 32\%$$

b) 27 out of 100

$$\frac{27}{100} = 27\%$$

Write the following percents as a fraction:

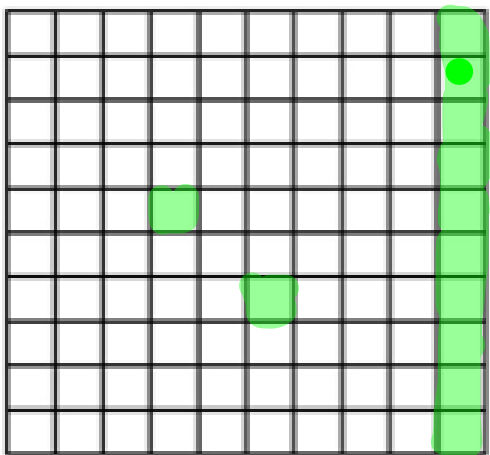
a) 17% = $\frac{17}{100}$

b) 15% = $\frac{15}{100} \div 5 = \frac{3}{20}$

15	100
1 x 15	1 x 100
3 x 5	2 x 50
	4 x 25
	5 x 20

You try

Write a fraction with hundreds, and a percent, to the shaded part of the grid.



<https://youtu.be/2zuRQmwaREY?si=ERR6HMRDF6NSCidL>

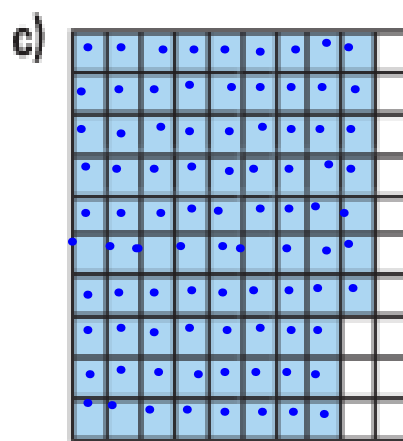
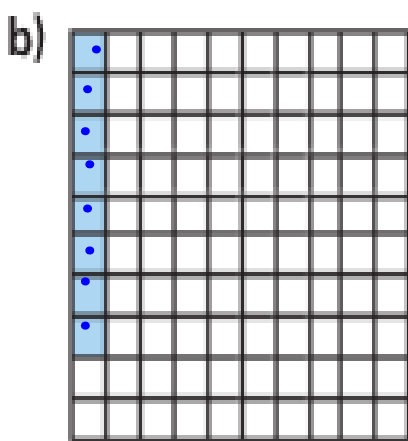
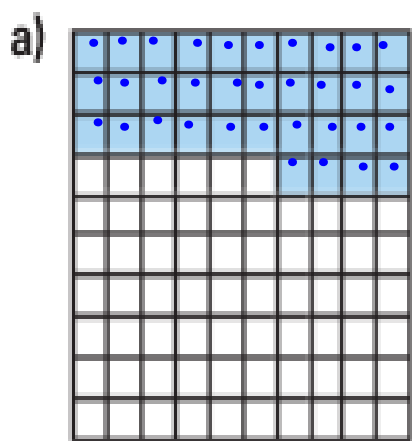
Class/Homework

Hundreds grids

Practice

1. Write:

- a fraction with hundredths
 - ~~a decimal~~
 - a percent
- to name the shaded part of each grid.



$$\frac{34}{100} = 34\%$$

$$\frac{8}{100} = 8\%$$

$$\frac{87}{100} = 87\%$$

$$\frac{8}{100} = \frac{2}{25}$$

~~$$\begin{array}{l}
 1 \times 8 \\
 2 \times 4 \\
 4 \times 25
 \end{array}$$~~

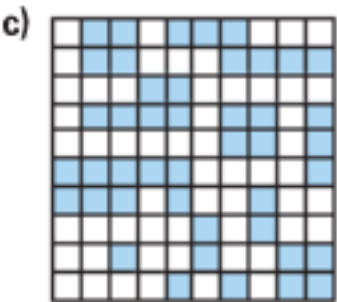
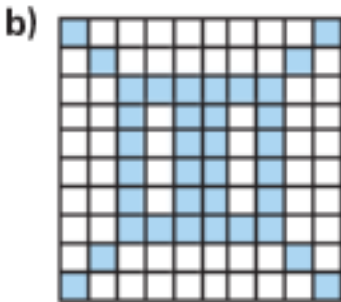
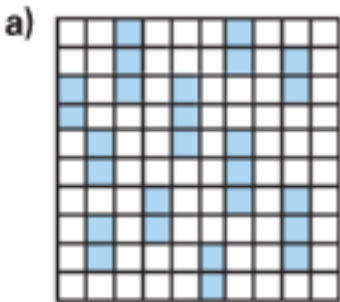
$$\begin{array}{l}
 100 \\
 1 \times 100 \\
 2 \times 50
 \end{array}$$

2. Write:

- a fraction with hundredths
 - a decimal
 - a percent
- to name the unshaded part of each grid in question 1.

3. For each grid in question 1, add the percents you used to name the shaded and unshaded parts.
What do you notice? Why do you think this happens?

4. Estimate the percent of each grid that is shaded.
Then count the squares to check.



5. ~~Use Base Ten Blocks to show each percent~~

Then write each percent as a ~~decimal~~.

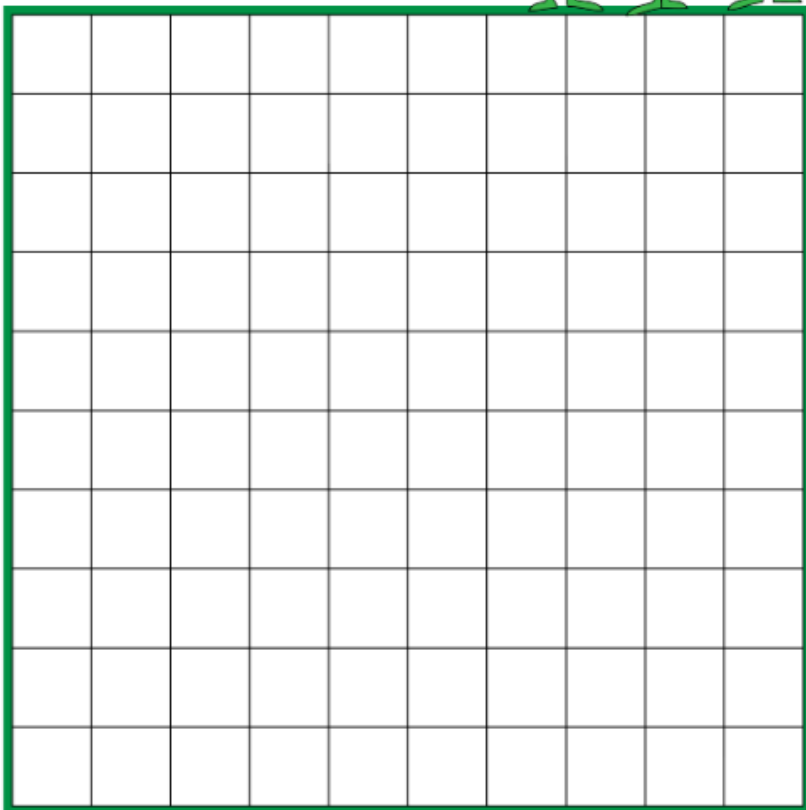
a) 84%

b) 17%

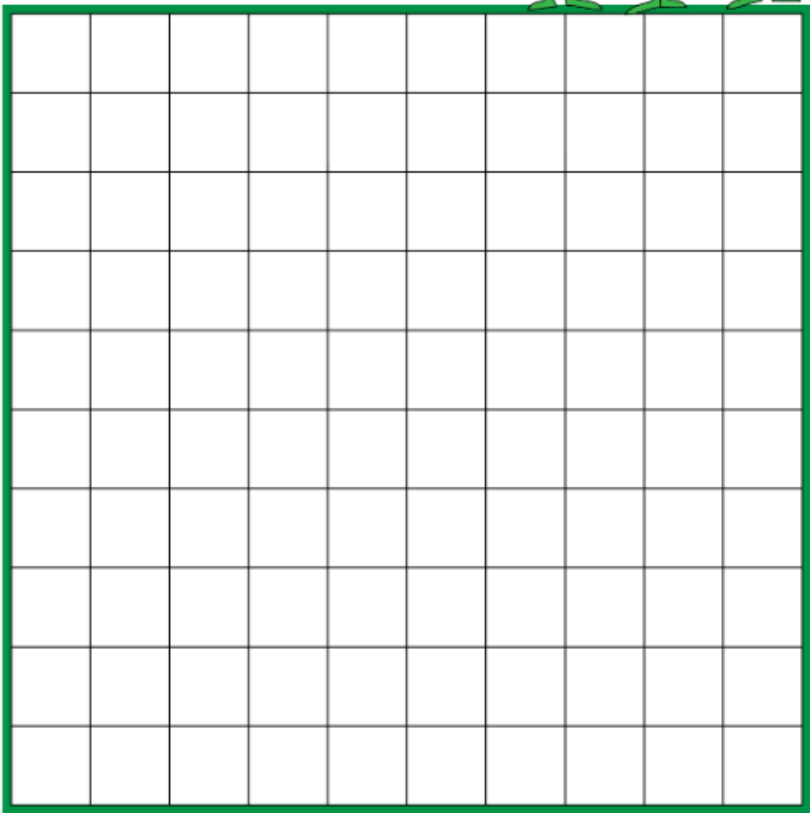
c) 25%

d) 100%

6. a) Use a hundredths grid. Colour 20% red, 13% blue, 32% green, and 23% yellow.
- b) Write a fraction to describe the part of the grid that is each colour.
- c) Write a decimal and a percent to describe the part of the grid that is not coloured.



7. a) Use a hundredths grid. Choose a different colour for each hike in *Explore*.
Colour a section of the grid to show the fraction of students who chose that hike.
- b) Write a percent to describe each section of the grid in part a.



Hike	Number of Students
Camel's End Coulee Hike	21
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8. Write as a percent. Then write as a decimal.

a) 64 out of 100

b) $\frac{50}{100}$

c) 1 out of 100

d) $\frac{17}{100}$

9. Write each percent as a fraction with hundredths. Then write as a decimal.

a) 13%

b) 5%

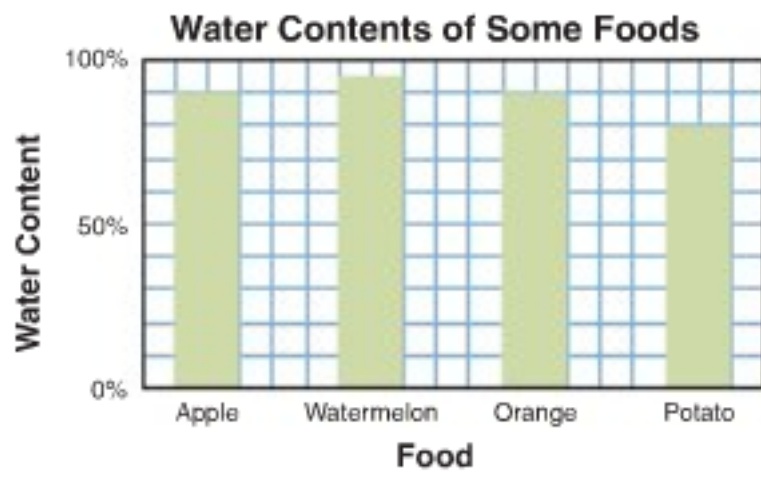
c) 79%

d) 64%

10. Ninety-seven percent of Earth's water is salt water.
What percent is fresh water?
How do you know?



11. The graph shows the water contents of some foods.



- About what percent of each food is water?
- About what percent of each food is not water?
- Write each percent in the graph as a fraction.

12. Janette bought a portable CD player on sale.
The regular price was \$100. She was charged \$89.
- a) What percent of the regular price did Janette pay?
 - b) What percent of the regular price did she receive as a discount?

13. Salvo said that of the 100 singers in a children's choir in Whitehorse, 62% are girls and 48% are boys. Is this possible?
Use words and pictures to explain.



