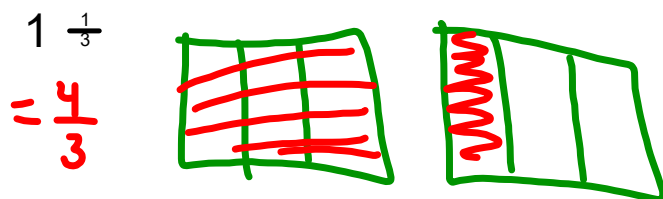


Math Review Unit 5 Warm Up

* Remember to write down the question before you answer it.

Represent the following fractions with a diagram.



Worksheet

Reducing Fractions (A)

Instructions: Reduce each fraction to its lowest terms.

$$\frac{2}{4} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{1}{2}$$

$$\frac{35}{40} \begin{array}{l} \div 5 \\ = \\ \div 5 \end{array} = \frac{7}{8}$$

$$\frac{10}{16} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{5}{8}$$

$$\frac{8}{36} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{2}{9}$$

$$\frac{18}{20} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{9}{10}$$

$$\frac{4}{36} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{1}{9}$$

$$\frac{6}{9} \begin{array}{l} \div 3 \\ = \\ \div 3 \end{array} = \frac{2}{3}$$

$$\frac{2}{10} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{1}{5}$$

$$\frac{3}{30} \begin{array}{l} \div 3 \\ = \\ \div 3 \end{array} = \frac{1}{10}$$

$$\frac{44}{48} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{11}{12}$$

$$\frac{5}{15} \begin{array}{l} \div 5 \\ = \\ \div 5 \end{array} = \frac{1}{3}$$

$$\frac{10}{35} \begin{array}{l} \div 5 \\ = \\ \div 5 \end{array} = \frac{2}{7}$$

$$\frac{10}{45} \begin{array}{l} \div 5 \\ = \\ \div 5 \end{array} = \frac{2}{9}$$

$$\frac{6}{14} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{3}{7}$$

$$\frac{28}{32} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{7}{8}$$

$$\frac{20}{24} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{5}{6}$$

$$\frac{5}{15} \begin{array}{l} \div 5 \\ = \\ \div 5 \end{array} = \frac{1}{3}$$

$$\frac{4}{32} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{1}{8}$$

$$\frac{30}{35} \begin{array}{l} \div 5 \\ = \\ \div 5 \end{array} = \frac{6}{7}$$

$$\frac{3}{6} \begin{array}{l} \div 3 \\ = \\ \div 3 \end{array} = \frac{1}{2}$$

$$\frac{14}{24} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{7}{12}$$

$$\frac{18}{20} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{9}{10}$$

$$\frac{14}{18} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{7}{9}$$

$$\frac{5}{35} \begin{array}{l} \div 5 \\ = \\ \div 5 \end{array} = \frac{1}{7}$$

$$\frac{4}{40} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{1}{10}$$

$$\frac{35}{50} \begin{array}{l} \div 5 \\ = \\ \div 5 \end{array} = \frac{7}{10}$$

$$\frac{2}{18} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{1}{9}$$

$$\frac{2}{4} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{1}{2}$$

$$\frac{2}{6} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{1}{3}$$

$$\frac{2}{14} \begin{array}{l} \div 2 \\ = \\ \div 2 \end{array} = \frac{1}{7}$$

$$\frac{28}{40} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{7}{10}$$

$$\frac{4}{28} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{1}{7}$$

$$\frac{45}{50} \begin{array}{l} \div 5 \\ = \\ \div 5 \end{array} = \frac{9}{10}$$

$$\frac{12}{28} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{3}{7}$$

$$\frac{12}{40} \begin{array}{l} \div 4 \\ = \\ \div 4 \end{array} = \frac{3}{10}$$

$$\frac{25}{60} \begin{array}{l} \div 5 \\ = \\ \div 5 \end{array} = \frac{5}{12}$$

Practice

1. Draw Base Ten Blocks or shade a hundredths grid to represent each fraction.
Write each fraction as a percent and as a decimal.

a) $\frac{6}{100} = 6\% = 0.06$ b) $\frac{81}{100} = 81\% = 0.81$ c) $\frac{17}{50} = \frac{34}{100} = 34\% = 0.34$ d) $\frac{3}{10} = \frac{30}{100} = 30\% = 0.30$
 e) $\frac{1}{50} = \frac{2}{100} = 0.02 = 2\%$ f) $\frac{1}{5} = \frac{20}{100} = 20\% = 0.20$ g) $\frac{7}{20} = \frac{35}{100} = 35\% = 0.35$ h) $\frac{3}{4} = \frac{75}{100} = 75\% = 0.75$

2. Draw Base Ten Blocks or shade a hundredths grid to represent each decimal.
Write each decimal as a fraction and as a percent.

- a) 0.97 b) 0.03 c) 0.16 d) 0.5
 e) 0.65 f) 0.24 g) 0.09 h) 0.7

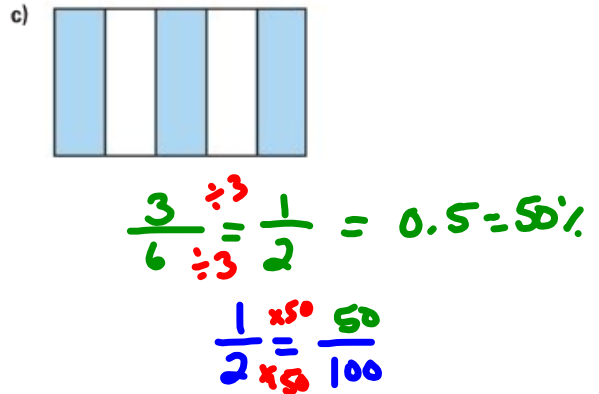
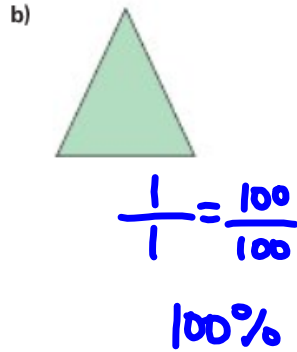
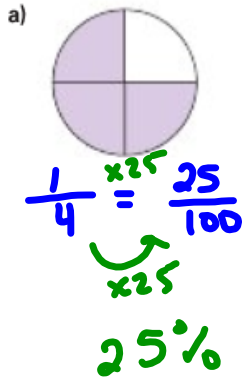
a) $\frac{97}{100} = 97\%$ b) $\frac{3}{100} = 3\%$ c) $0.16 = \frac{16}{100} = \frac{8}{50} = \frac{4}{25}$
 d) $0.5 = \frac{50}{100} = \frac{5}{10} = \frac{1}{2} = 50\%$ e) $0.65 = \frac{65}{100} = \frac{13}{20} = 65\%$
 f) $0.24 = \frac{24}{100} = \frac{12}{50} = \frac{6}{25} = 24\%$ g) $0.09 = \frac{9}{100} = 9\%$ h) $0.7 = \frac{70}{100} = \frac{7}{10} = 70\%$

3. Draw Base Ten Blocks or shade a hundredths grid to represent each percent.
Write each percent as a fraction and as a decimal.

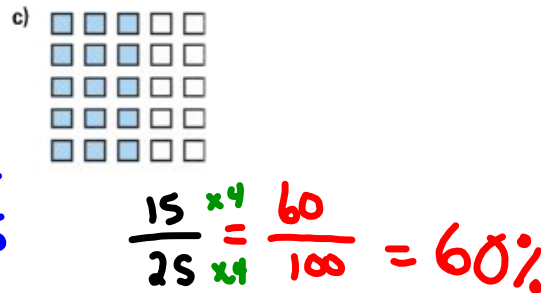
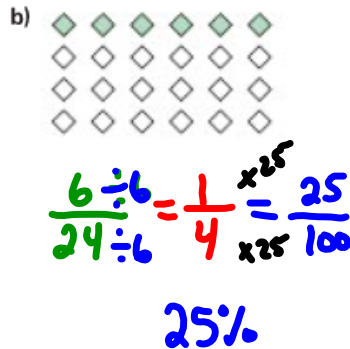
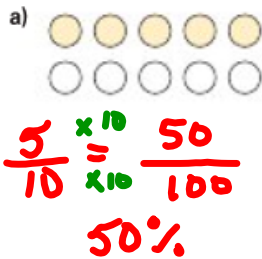
- a) 14% b) 99% c) 25% d) 40%
 e) 35% f) 6% g) 90% h) 15%

a) $14\% = \frac{14}{100} = \frac{7}{50} = 0.14$ b) $99\% = \frac{99}{100} = 0.99$ c) $25\% = \frac{25}{100} = \frac{1}{4} = 0.25$ d) $40\% = \frac{40}{100} = \frac{2}{5} = 0.40$
 e) $35\% = \frac{35}{100} = \frac{7}{20} = 0.35$ f) $6\% = \frac{6}{100} = \frac{3}{50} = 0.06$ g) $90\% = \frac{90}{100} = \frac{9}{10} = 0.9$ h) $15\% = \frac{15}{100} = \frac{3}{20} = 0.15$

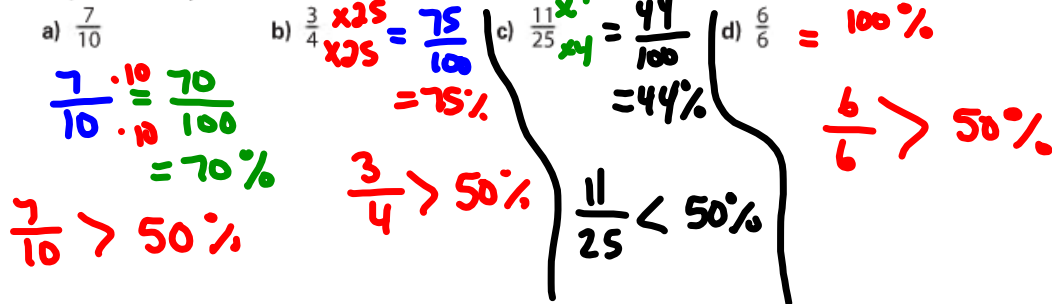
4. What percent of each whole is shaded?
Show how you found your answers.



5. What percent of each set is shaded?
Show how you found your answers.



6. Is each fraction greater than or less than 50%?
Explain how you know.



7. Luis used a calculator to find a decimal and a percent equal to $\frac{1}{4}$.
How might Luis have done this?

$$1 \div 4 = 0.25$$

$$\frac{1}{4} \stackrel{\times 25}{=} \frac{25}{100} = 25\%$$

↑
on calculator
Decimal \rightarrow %
 $\times 100$



8. Use the data in the table. Is each statement true or false? Explain how you know.

Members of the Audience

Age Group	Percent
Children	13%
Teens	45%
Adults	34%
Seniors	8%

- a) More than 50% of the audience were adults or seniors. **F**
- b) Of the audience, $\frac{58}{100}$ were children or teens. **T**
- c) More than $\frac{1}{4}$ of the audience were adults. **T**
- d) Less than 0.5 of the audience were teens or adults.

a) Adults + Seniors $34\% + 8 = 42\%$

b) Children + teen = $13\% + 45\% = 58\% \rightarrow \frac{58}{100}$

9. Which is least? Which is greatest?

How do you know?

$10\% = \frac{1}{10} \times 10 = 0.01 \Rightarrow \frac{1}{100} \Rightarrow 1\%$
 $\frac{1}{100} \downarrow 10\%$

$\frac{1}{10} = 10\%$ greatest

$0.01 \Rightarrow 1\%$
so least

10. Ravi got 18 out of 20 on a math quiz.

Karli got 85% on the quiz.

Whose mark was greater? How do you know?

Ravi: $\frac{18}{20} = \frac{9}{10} \times \frac{10}{10} = \frac{90}{100} = 90\%$ for Ravi

Ravi's mark was greater

11. Write a percent that represents:

- a) a very little of something
- b) almost all of something
- c) a little more than $\frac{3}{4}$ of something
- d) between 0.25 and 0.50 of something

How did you choose each percent?

Convert the following fractions. *Mixed*

$$\frac{8}{3} \quad 2\frac{2}{3}$$

$$\frac{5}{3} \quad 1\frac{2}{3}$$

$$\frac{12}{5} \quad 2\frac{2}{5}$$

Convert the following fractions.

Mixed \rightarrow Improper

$$3 \frac{1}{2} \rightarrow \frac{7}{2}$$

$$7 \frac{3}{4} \rightarrow \frac{31}{4}$$

Find equivalent fractions then put them in order from least to greatest.

$$\frac{14}{7}$$

$$\Downarrow$$
$$2$$

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

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

$$2\frac{2}{3}$$

$$2\frac{2}{3}$$

$$\frac{5}{3}, \frac{14}{7}, 2\frac{2}{3}$$

Ratu made $4\frac{1}{2}$ dozen pancakes,
 Addie made $\frac{28}{6}$ dozen pancakes,
 and Penny made $\frac{13}{3}$ dozen pancakes.
 Who made the most pancakes?
 Who made the least?



<p>Ratu</p> <p>$4\frac{1}{2}$</p> <p>$4\frac{1}{2}$</p> <p>$4\frac{3}{6}$ $\swarrow \times 3$</p>	<p>Addie</p> <p>$\frac{28}{6}$</p> <p>$4\frac{4}{6}$</p> <p>$4\frac{4}{6}$</p> <p>greatest</p>	<p>Penny</p> <p>$\frac{13}{3}$</p> <p>$4\frac{1}{3}$</p> <p>$4\frac{2}{6}$ $\swarrow \times 2$</p> <p>least</p>
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What is being compared?

- a. 7 : 5 **Black : Red**
- b. 5 : 12 **Red : Total**
- c. 5 : 7 **Red : Black**

part : part
part : total
whole

What type ratios are the following?

- a. 5 : 7 **R : B** ←
- b. 7 : 12 ←

Are the following ratios equivalent?

a. $6:7$ $12:14$ $30:35$

$\times 5$
 $\begin{matrix} \times 2 & \times 2 \\ 12:14 \\ \downarrow & \downarrow \\ 30:35 \end{matrix}$

b. $2:4$ $10:20$ $40:80$

$\times 20$
 $\begin{matrix} \times 5 & \times 5 \\ 10:20 \\ \downarrow & \downarrow \\ 40:80 \end{matrix}$

c. $3:3$ $6:6$ $9:9$

$\times 2$ $\times 3$

d. $5:8$ $10:16$ $15:21$

$\times 3$
 $\begin{matrix} \times 2 & \times 2 \\ 10:16 \\ \downarrow & \downarrow \\ 15:24 \end{matrix}$

Not

X

Write an equivalent ratio with 20 as one of the terms.

a. $3 : 5$
 $\times 4 \downarrow$ $\times 4$
 $12 : 20$

b. $2 : 10$
 $\times 10 \downarrow$ $\times 10$
 $20 : 100$

$2 : 10$
 $\times 2 \downarrow$ $\times 2$
 $4 : 20$

c. $1 : 4$
 $\times 5 \downarrow$ $\times 5$
 $5 : 20$

Su Mei's recipe for bean salad calls for 3 cans of lima beans, 2 cans of pinto beans, and 1 can of kidney beans.

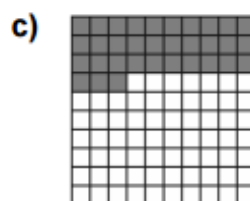
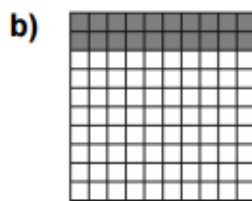
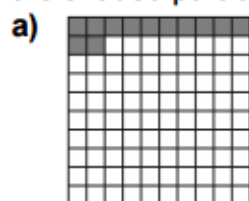
Su Mei is making bean salad for her family reunion.

Suppose she uses 9 cans of lima beans.

- a) How many cans of pinto beans will she use?
- b) How many cans of kidney beans will she use?

$$\begin{array}{l} L : P : K \\ 3 : 2 : 1 \\ 9 : \square : \square \end{array}$$

Write a fraction with hundredths, a decimal, and a percent to name the shaded part of each grid.



$$\frac{12}{100} \stackrel{\div 2}{=} \frac{6}{50} \stackrel{\div 2}{=} \frac{3}{25}$$

$$= 0.12$$

$$= 12\%$$

Write as a percent. Then write as a decimal.

a) 37 out of 100

0.37
37%

b) $\frac{28}{100}$

0.28
28%

c) 13 : 100

0.13
13%

d) $\frac{93}{100}$

93%
0.93

e) $\frac{5}{100}$

0.05
5%

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

a) 12%

b) 2%

c) 81%

d) 65%

$$\frac{12}{100} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{6}{50} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{3}{25}$$

0.12

Write each fraction as a percent and as a decimal.

a) $\frac{18}{100}$

b) $\frac{73}{100}$

c) $\frac{4}{100}$

d) $\frac{26}{100}$

e) $\frac{3}{10}$ $\begin{matrix} \times 10 \\ \times 10 \end{matrix}$

f) $\frac{7}{20}$

g) $\frac{6}{25}$

h) $\frac{29}{50}$

$$\frac{30}{100}$$

$$30\%$$

$$0.30$$

Write each fraction as a percent.

a) $\frac{8}{32}$

b) $\frac{9}{18}$

c) $\frac{6}{20}$

d) $\frac{35}{70}$

e) $\frac{4}{25}$

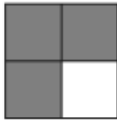
f) $\frac{6}{15}$

g) $\frac{14}{28}$

h) $\frac{3}{4}$

What percent of each whole is shaded?

a)



b)



c)



$$\frac{3}{4} \stackrel{\times 25}{=} \frac{75}{100}$$

\curvearrowright
 $\times 25$

75%

0.75

Write each decimal as a fraction and as a percent.

a) 0.21

b) 0.68

c) 0.09

d) 0.24

e) 0.03

f) 0.75

g) 0.15

h) 0.99