

GRADE 6: FRACTIONS, RATIO & PERCENT (#4)

Objective assessed in this category:

- ✓ Relate improper fractions to mixed numbers
- ✓ Demonstrate an understanding of ratio, concretely, pictorially and symbolically
- ✓ Demonstrate an understanding of percent (limited to whole numbers) concretely, pictorially and symbolically

a. Which is the improper fraction?

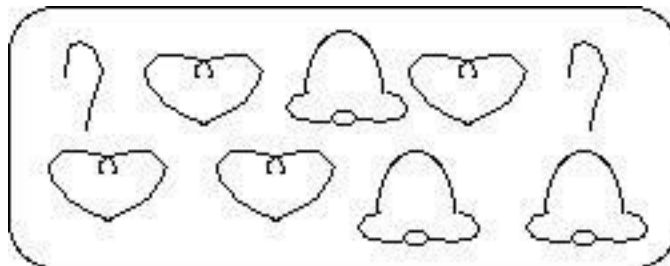
a. $2\frac{1}{2}$

b. $\frac{5}{8}$

c. $\frac{37}{100}$

d. $\frac{7}{3}$

b. These Christmas cookies are on a tray. What is the ratio of heart cookies to candy cane cookies?



c. "A percent is a ratio out of 100." True or False?

d. Draw a picture to represent the following improper fractions.

$$\frac{8}{3}$$

$$\frac{18}{5}$$

e. This chart shows the number of Smarties in a box. There are 18 Smarties all together.

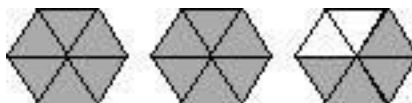
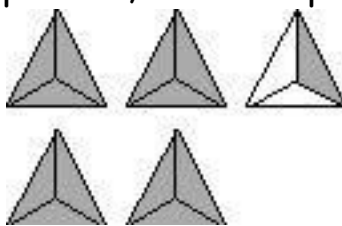
Smartie Color	# of Smarties
Red	5
Green	4
Purple	2
Brown	6
Pink	1

What is the ratio of brown Smarties to the total number of Smarties?

- a. 18:6 b. 6:18 c. 6:1 d. 1:6

f. Three grade 6 classes were fundraising. 6A collected 25% of the total, 6B collected 50% of the total and 6C collected 25% of the total. Draw a pie chart that correctly displays this information.

g. Write a mixed number and an improper fraction, using the shaded portion, for each picture.



h. Draw a picture that represents the ratio 2:5.

i. Jaydon bought a 600 mL bottle of pop and has drank 50% of it. How much does he have left?

j. A number that is made up of a whole number and a fraction is called:

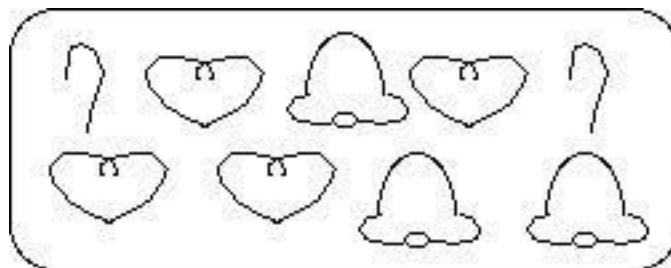
a. a composite number

b. an equivalent fraction

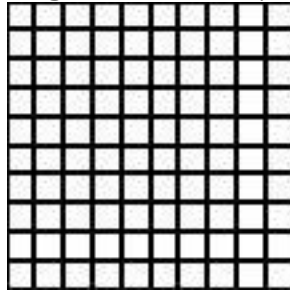
c. a mixed number

d. an improper fraction

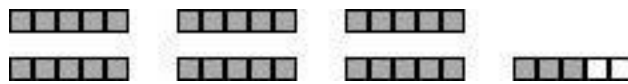
k. These Christmas cookies are on a tray. What cookies are represented by the ratio 3 to 9?



l. Shade 82% of this hundred grid. What percent is NOT shaded?



m. The shaded part of the picture below represents which mixed number?



a. $6\frac{3}{5}$

b. $1\frac{2}{5}$

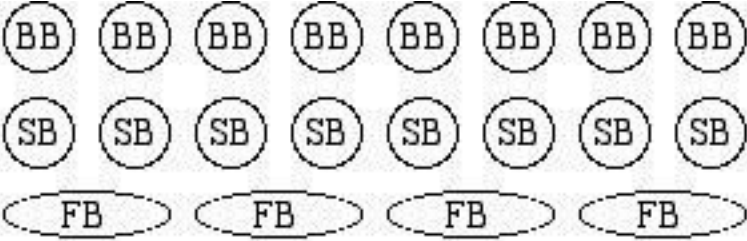
c. $\frac{30}{5}$

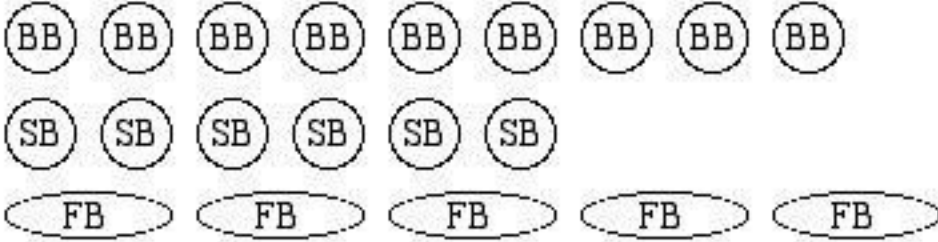
d. $\frac{33}{5}$

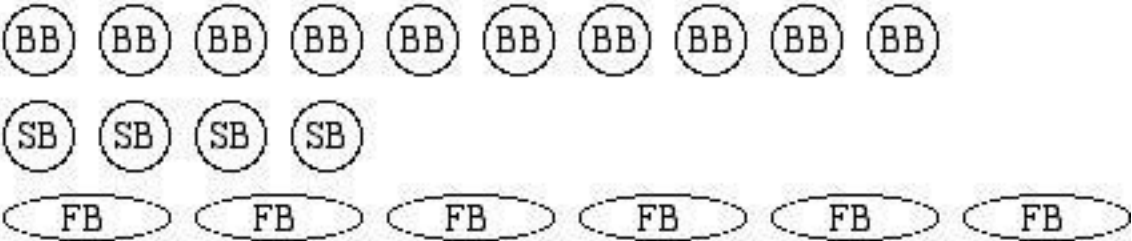
n. If John has 4 loonies and 3 quarters, explain the ratio 3:7.

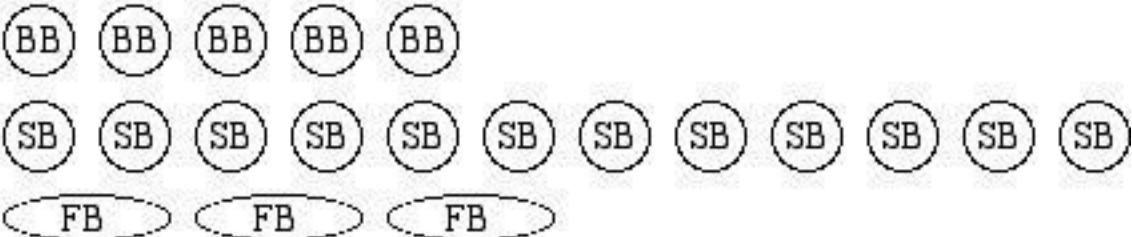
o. The gym teacher was going through the 20 balls that were returned at the end of the year. Which picture shows that 40% of the balls were soccer balls?

BB=basketball SB=soccer ball FB=football

a. 

b. 

c. 

d. 

p. True or False: $\frac{12}{8}$ is an improper fraction. Explain why or why not.

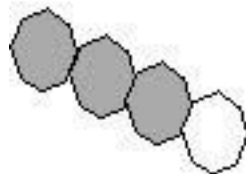
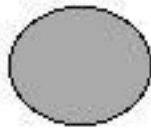
q. The following chart shows the number of boys and girls in 3 different families.

Family	Boys	Girls
Tanya	4	1
Bill	2	2
Vicky	1	3

The ratio of total boys to girls in these families is:

- a. 6:7 b. 7:6 c. 4:1 d. 1:3

r. Match the picture on the left with the percent on the right.



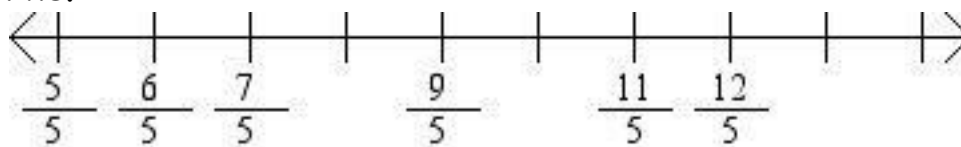
75%

25%

70%

100%

s. Finish filling in the improper fractions under the number line. Write the equivalent mixed number on top of every number on the number line.



t. Tyler was going through his book shelf. He found that he had 15 chapter books, 18 comic books and 6 magazines. What is the ratio of chapter books to magazines?

u. What means "out of 100"?

- a. a percent b. a mixed number c. a ratio d. a fraction

v. Match each improper fraction with its equivalent mixed number.

$$\frac{9}{6}$$

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

$$\frac{15}{10}$$

$$2\frac{1}{6}$$

$$\frac{8}{3}$$

$$1\frac{3}{6}$$

$$\frac{13}{6}$$

$$1\frac{5}{10}$$

w. While out on a bug hunt, Adam saw: 25 ants, 6 mosquitoes, 8 spiders and 3 ladybugs

Write ratios to compare the bugs that he saw. Write each ratio 3 different ways.

spiders to ladybugs _____

mosquitoes to ants _____

spiders to total bugs _____

x. Write each percent as a fraction with hundredths and as a decimal.

62%

81%

39%

y. Draw a picture to show the following mixed numbers.

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

$$1\frac{7}{10}$$

z. Lyn is making punch for the bocce ball tournament. It takes 1 L of juice and 2 L of pop to make a jug of punch. If she wants to use 4 L of juice, how much pop will she need to buy? How many jugs of punch will that make?

aa. The human body is about 60% water. What percent is NOT water? Explain how you know.

bb. Write each mixed number as an improper fraction.

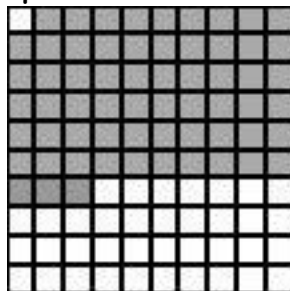
$$2\frac{3}{5}$$

$$7\frac{1}{6}$$

$$3\frac{3}{4}$$

cc. Through a survey, it was discovered that for every student in your class that walked, seven took the bus. Draw a picture that shows this.

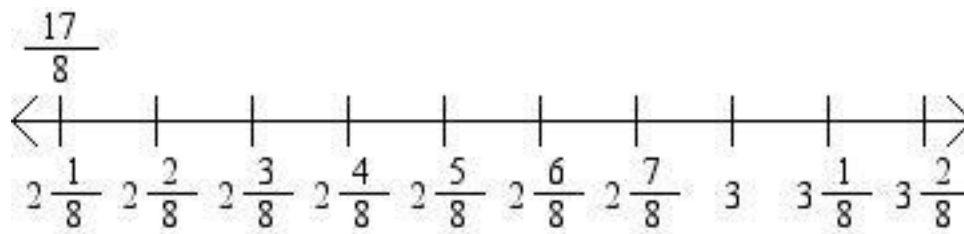
dd. What percent of this hundred grid is shaded?
The ratio of white to gray squares is



ee. Use the number line below to answer the following questions.

What improper fraction is equivalent to $2\frac{6}{8}$?

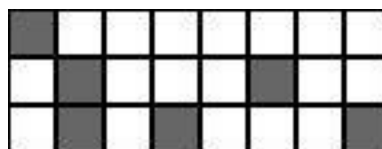
Circle the mixed number that is equivalent to $\frac{25}{8}$.



ff. The grade 6A class prefers Coke over Pepsi 5 to 1. What does this mean?

gg. The following diagram shows 6B's mailboxes.

SHADED=FULL WHITE=EMPTY



What percentage of mailboxes are still full?

- a. 60% b. 75% c. 6% d. 25%

hh. Can $\frac{1}{4}$ be written as a mixed number? Explain.

ii. I have 4 boxes of macaroni and cheese. That will feed 24 people. How many people does each box feed? Write your answer as a ratio.

jj. 75% of these Smarties are red and 25% are blue. Label them correctly.



kk. Place the following mixed numbers and improper fractions on the number line:

$$5\frac{7}{8} \quad 7\frac{1}{4} \quad \frac{13}{2} \quad \frac{16}{3}$$



ll.



Using the pictures above, what is being compared in each ratio?
3 to 5

1:9

$\frac{5}{1}$

mm. The bike that Jason wants to buy is \$200. His Mom said that when he has saved 75% of the money, she will put in the rest. How much money will Jason need to save?

nn. Write each improper fraction as a mixed number.

$\frac{13}{3}$

$\frac{20}{8}$

$\frac{9}{2}$

oo. On a school field trip, the museum requires 1 adult for every 4 students. Write this as a ratio. _____ If your class has 28 students, how many adults must go? _____

pp. If a test has 50 questions, how many do you need to get right to get a mark of 80%?

qq. Which improper fraction comes between 2 and 3?

a. $\frac{17}{4}$

b. $\frac{7}{3}$

c. $\frac{10}{2}$

d. $\frac{3}{3}$

rr. Sarah Brenner is delighted to discover that the manufacturer of her favourite candy, Star Bar is offering a special promotion. Each customer will receive a free candy bar when seven Star Bar wrappers are presented. After persuading her classmates to donate their

wrappers to her, Sarah has 56 wrappers. How many free Star Bars can Sarah collect altogether at the candy store?

ss. Jane ate $\frac{2}{5}$ of a plate of brownies. That is equivalent to:

- a. 2% b. 5% c. 20% d. 40%

tt. Mary baked 6 pies for the bake sale. She cut each pie into 6 pieces. She sold 23 pieces of pie.

Write the number of pieces she sold 2 ways (mixed number and improper fraction).

Write the number of pieces left 2 ways (mixed number and improper fraction).

uu. Bill has a preferred member card for the local meat shop. With every purchase he received 10% off. He also saw a coupon in the latest flyer advertising \$2.00 any purchase although the coupon couldn't be used with his preferred member card. If the meat he wants to buy is \$16.76, which is the better deal--using the preferred member card or the \$2.00 off?

vv. List these fractions from greatest to least: $2\frac{2}{3}$, $\frac{14}{4}$, $\frac{10}{6}$