

Name: _____

Expressing Decimals

Professor Penelope is getting ready to launch Mr. Snoots into orbit. She is mixing up her super duper, top secret, hyper-boost rocket fuel. Help Professor Penelope convert the fractions, mixed numbers, and division expressions into decimals so she can fill her canisters and fulfill Mr. Snoots's dreams of intergalactic exploration.



FRACTIONS - Write each fraction as a decimal. _____

ALUMINUM: $\frac{1}{5} = \frac{2}{10} = 0.2$

AMMONIUM: $\frac{1}{2} = \text{---} =$

PLASTICIZER: $\frac{3}{5} = \text{---} =$

RUBBER:

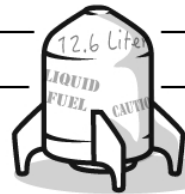
$\frac{2}{5} = \text{---} =$

CANISTER #1



MIXED NUMBERS - Write the mixed numbers as decimals. _____

LIQUID OXYGEN: $2\frac{4}{5} = 2\frac{8}{10} = 2.8$



CANISTER #2

LIQUID HYDROGEN: $3\frac{2}{5} = \text{---} =$

LIQUID METHANE: $2\frac{9}{10} = \text{---} =$

DIVISION EXPRESSIONS - Write the division expressions as decimals. _____

LIQUID FLUORINE: $3 \div 25 = \frac{3}{25} = \frac{12}{100} = .12$

MINERAL SALT:

$9 \div 25 = \text{---} =$

NITRIC ACID: $7 \div 20 = \text{---} = \text{---} =$

$\text{---} =$

KEROSENE: $42 \div 50 = \text{---} = \text{---} =$



CANISTER #3

Name: _____

Adding and Simplifying Fractions

Complete the addition sentence to match each monster.

Below your addition sentence write the fractions in their simplest form.

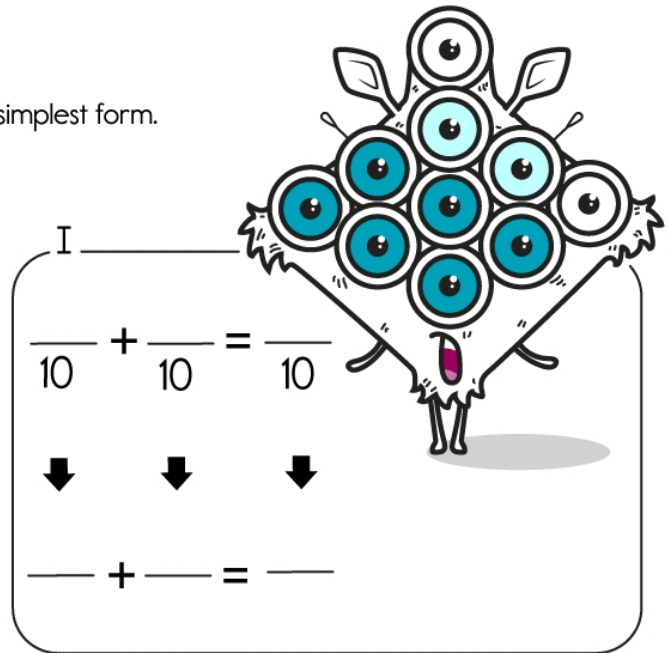


EXAMPLE

$$\frac{8}{12} + \frac{3}{12} = \frac{11}{12}$$

$\div 4$ $\div 3$ can't simplify
 \downarrow \downarrow \downarrow

$$\frac{2}{3} + \frac{1}{4} = \frac{11}{12}$$

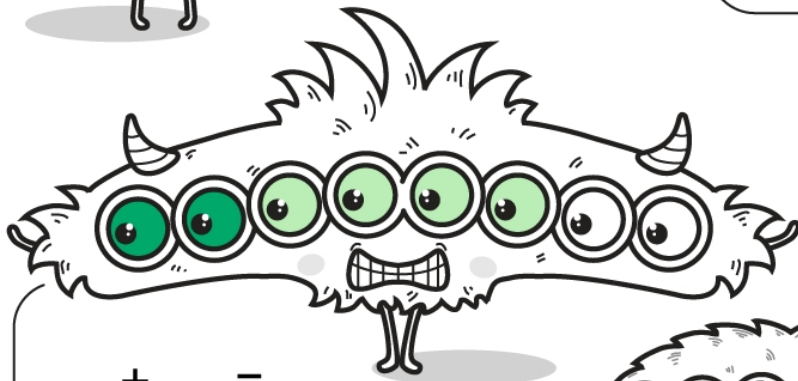


I _____

$$\frac{\quad}{10} + \frac{\quad}{10} = \frac{\quad}{10}$$

\downarrow \downarrow \downarrow

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$$



$$\frac{8}{\quad} + \frac{8}{\quad} = \frac{\quad}{\quad}$$

\downarrow \downarrow \downarrow

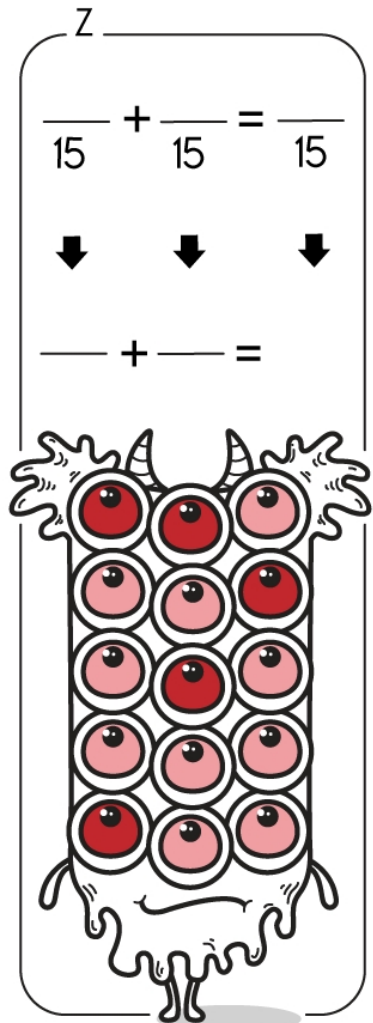
$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$$

R



What do you call an angry monster?

$$\frac{5}{6} \quad \frac{4}{5} \quad \frac{3}{4}$$



Z _____

$$\frac{\quad}{15} + \frac{\quad}{15} = \frac{\quad}{15}$$

\downarrow \downarrow \downarrow

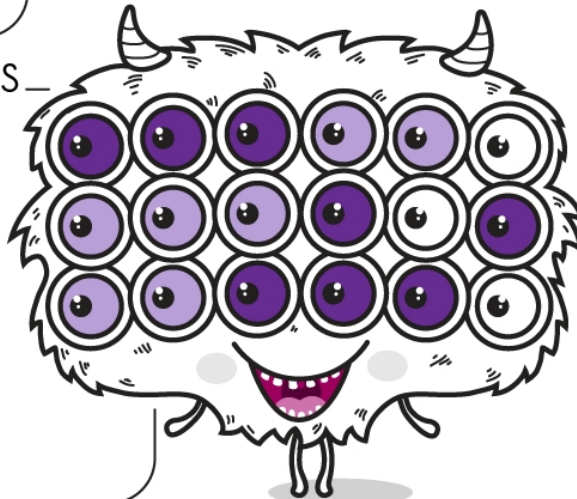
$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$$

S

$$\frac{\quad}{18} + \frac{\quad}{18} = \frac{\quad}{18}$$

\downarrow \downarrow \downarrow

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$$



Name: _____

What is the sum of $4\frac{1}{2}$ and $3 \div 6$?

Sara installed an app to track how much her dog moves each day. Today Sara walked her dog $3\frac{2}{5}$ kilometers before breakfast. Sara walked her dog $2\frac{2}{3}$ kilometers after dinner. Her dog walked $\frac{1}{4}$ of a kilometer in the house.

How much should the tracker app say her dog walked today?

$$\frac{4}{7} = 4 \div 7$$

$$\frac{2}{9} =$$

$$\frac{6}{12} =$$

$$\frac{3}{11} =$$

Amy and Sarah are so lucky. They each have hedgehogs!

Amy's hedgehog is named Max and weighs $14\frac{4}{5}$ ounces. Sarah's hedgehog is $1\frac{1}{4}$ ounces lighter and is named Alex.

How many ounces does Alex weigh?

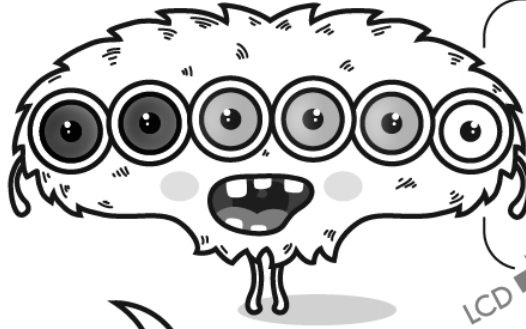
$$4\frac{1}{4} + 5\frac{7}{8} - 7\frac{4}{5}$$

$$2\frac{1}{3} + 3\frac{5}{6} + 2\frac{4}{5}$$

Name: _____

Adding Unlike Fractions

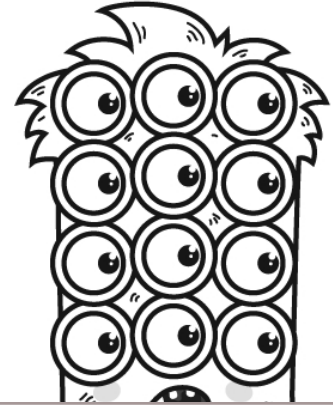
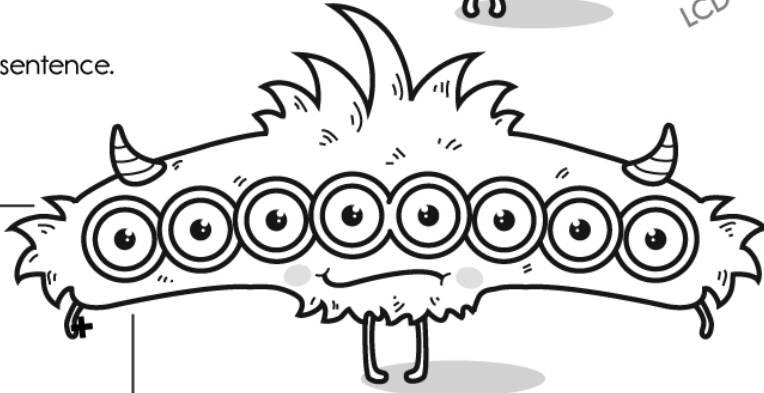
- Make the **unlike** fractions into **like** fractions by finding the least common denominator (LCD).
- Using two different colors, color in the eyeballs to show each fraction pair.
- Solve the addition sentence.



$$\frac{1}{3} + \frac{1}{2} =$$

$$\frac{2}{6} + \frac{3}{6} =$$

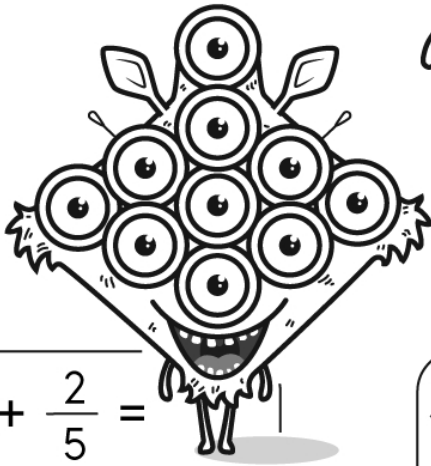
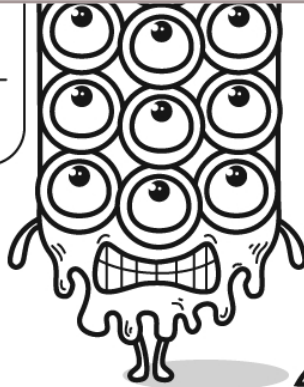
$$\frac{1}{2} + \frac{3}{8} =$$



PREVIEW

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$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$$

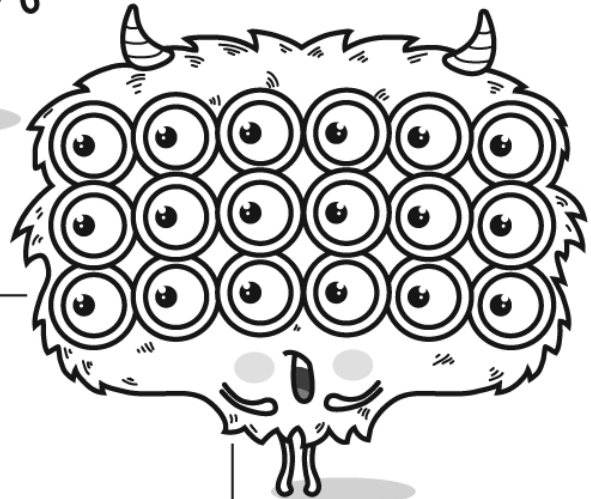


$$\frac{1}{2} + \frac{2}{5} =$$

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$$

$$\frac{2}{6} + \frac{2}{9} =$$

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$$



BONUS!

Name: _____

This fraction is not in simplest form. To reduce this fraction to simplest form you need to divide both the numerator and denominator of this fraction by fifteen. If you multiply the numerator by 3, the numerator would be 45. What is this fraction?

This fraction is not in simplest form. When this fraction is reduced to simplest form, the numerator is 3 less and the denominator is 6 less. Whew! That's confusing! The numerator

PREVIEW

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This fraction is not in simplest form. To reduce this fraction to simplest form you need to divide both the numerator and denominator of this fraction by sixteen. If you multiply the numerator by 3, the numerator would be 48. What is this fraction?

Name: _____

Which fraction is greater than $\frac{1}{4}$?

$\frac{1}{7}$

$\frac{1}{5}$

$\frac{2}{6}$

$\frac{1}{6}$

Find the difference between $\frac{1}{2}$ and $\frac{3}{8}$.

$\frac{1}{8}$

$\frac{3}{8}$

$\frac{7}{8}$

$\frac{4}{8}$

Express $\frac{27}{8}$ as a mixed number.

$3\frac{3}{8}$

$3\frac{3}{4}$

 $\frac{1}{5}$, $\frac{6}{10}$, $\frac{2}{5}$

Rewrite the numbers in order from

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Which fraction is greater than $\frac{2}{5}$?

$\frac{1}{4}$

$\frac{2}{6}$

$\frac{1}{9}$

$\frac{6}{9}$

What is the sum of $\frac{1}{3}$ and $\frac{4}{9}$?

$\frac{7}{9}$

$\frac{3}{9}$

$\frac{1}{9}$

$\frac{2}{9}$

Name: _____

**FUN
BREAK!**

Play a game online!

edHelper.com/math-games.htm**I PLAYED
ONE
GAME****MY SCORE**

PREVIEW

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Sketch a right angle named $\angle GHI$.

Use a protractor to draw an acute angle $\angle GHI$.

Sketch an acute angle named $\angle DEF$.

Estimate quickly the difference.
 $7,830 - 1,050$

8, 10, _____, 14, 16, 18, 20,

22

Round 16,405 to the nearest thousand.

Name: _____

It's time for a pizza party. We got two pizzas to share with five kids. If we want everyone to have the same amount of pizza, then what fraction of a pizza should each kid get?

Hint: Draw a picture of the pizzas.

Make a fraction in simplest form.

$$10 \div 14 = \frac{10}{14} = \frac{10 \div 2}{14 \div 2} = \frac{5}{7}$$

$$54 \div 66 =$$

$$15 \div 50 =$$

$$15 \div 27 =$$

PREVIEW

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What is the sum of $3\frac{4}{5}$ and $9 \div 10$?

peared an equal amount of water into each of the bottles. In total, she used 6 quarts of water. How much water is in each bottle?

Let's make some fractions.

$$8 \div 12 = \frac{8}{12}$$

$$2 \div 11 =$$

$$2 \div 9 =$$

$$4 \div 7 =$$

$$7 \div 8 =$$

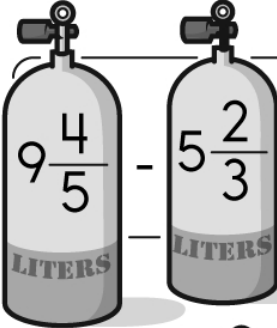
$$2 \div 6 =$$

Hint: First divide. Then simplify your fraction. If your answer is an improper fraction, then change it to a mixed number. And don't forget to add a label to the number. Otherwise, your answer is meaningless.

Name: _____

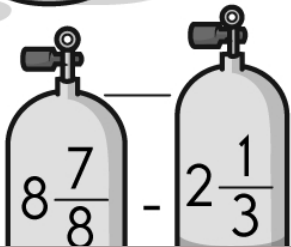
Subtracting Mixed Numbers

Professor Penelope is welcoming Mr. Snoots back from his latest big adventure, a series of **daring, DANGEROUS, DARK, deep-sea** dives. For research, she is checking how much air he used on each dive. Help Professor Penelope by finding the difference between each pair of tanks.



DIVE #1

$$9\frac{4}{5} - 5\frac{2}{3} = 9\frac{12}{15} - 5\frac{10}{15} = \underline{\hspace{2cm}}$$




DIVE #2

$$8\frac{7}{8} - 2\frac{1}{3} = \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$

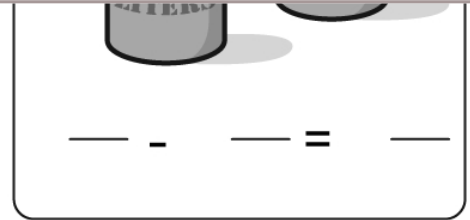


PREVIEW

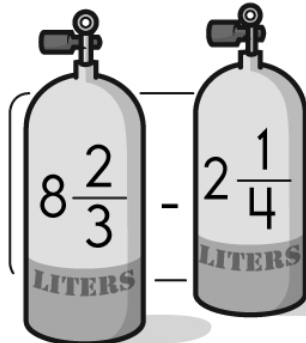
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$$7\frac{1}{2} - 1\frac{7}{7} = \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$

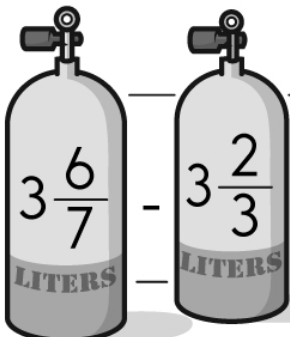


$$\underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$



DIVE #5

$$8\frac{2}{3} - 2\frac{1}{4} = \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$



DIVE #6

$$3\frac{6}{7} - 3\frac{2}{3} = \underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$

BONUS:

On which dive did Mr. Snoots use the most air?

Dive #1

Dive #4

Dive #2

Dive #5

Dive #3

Dive #6

Name: _____

Circle the like fractions.

There may be multiple answers.

$\frac{2}{9}$

$\frac{3}{8}$

$\frac{7}{9}$

Circle the prime numbers.

There may be multiple answers.

9

5

7

15

Rewrite the fraction in simplest form.

$\frac{4}{10} =$

Write the fraction as a decimal.

$\frac{8}{10} =$

PREVIEW

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$\frac{28}{6}$

•

•

$\frac{45}{6}$

$7\frac{1}{2}$

•

•

$\frac{32}{6}$

$5\frac{1}{3}$

•

•

$4\frac{2}{3}$

$\frac{7}{10} =$

10.7

0.7

0.07

 $\frac{2}{8}$ and $\frac{3}{8}$ are _____ fractions.

equivalent

like

Name: _____

Maria was doing a problem in the addition and subtraction fractions chapter of her math book. She wrote the answer of $1\frac{1}{6}$. Whoops, she realized she has to write out the entire equation. She remembered the two fractions had the numbers 2, 8, 3, and 4. But she forgot the equation, and she couldn't remember if she added or subtracted. Write out the complete equation.

Mary was doing a problem in the addition and subtraction fractions chapter of her math

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complete equation.

April was doing a problem in the addition and subtraction fractions chapter of her math book. She wrote the answer of $\frac{8}{15}$. Whoops, she realized she has to write out the entire equation. She remembered the two fractions had the numbers 5, 9, 1, and 3. But she forgot the equation, and she couldn't remember if she added or subtracted. Write out the complete equation.

Name: _____

Put these numbers in order from largest to smallest.

8.14

8.184

8.18

8.17

Mr. Lewis replaced one of the bulbs in the classroom with a 60-watt bulb that is supposed to last 6,000 hours. The bulb will be used 7 hours each day school is in session. In how

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Which two of the fractions have a difference of $\frac{1}{4}$?

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

$$\frac{2}{12}$$

$$\frac{1}{4}$$

$$\frac{3}{7}$$

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

Name: _____

Emma, Jacob, Maria, and Jenna made two pans of brownies. They want to share the brownies equally among themselves. What fraction of a pan of brownies will each of them get?

Wendy and Rose are so lucky. They each have hedgehogs!

Wendy's hedgehog is named Max and weighs

$15\frac{1}{8}$ ounces. Rose's hedgehog is $3\frac{1}{3}$ ounces

heavier and is named Justin.

How many ounces does Justin weigh?

PREVIEW

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quarter, dime, nickel, and 4 pennies?

missing.

$$16 \times 7 = 112$$

$$112 \div 16 = 7$$

$$7 \times 16 = 112$$

Know how many inches in a foot? Okay, smarty pants, how many inches in 4 feet?

How many meters are there in 149 kilometers?

$$27 + n = 46$$

What is the value of n?

Circle the relative adverb.
why, until, if, so

$$1 \text{ lb} = 16 \text{ oz}$$

$$13 \text{ lb} = \underline{\hspace{2cm}} \text{ oz}$$

Name: _____

$1\frac{4}{5}$

$1\frac{5}{8}$

$1\frac{1}{2}$

$1\frac{2}{3}$

$1\frac{3}{4}$

$1\frac{1}{4}$

$2\frac{2}{7}$

Name two of the above numbers that have a difference of $1\frac{1}{28}$.

$2\frac{1}{2}$

$2\frac{1}{6}$

$1\frac{2}{3}$

$2\frac{3}{7}$

$2\frac{3}{5}$

$1\frac{5}{8}$

$2\frac{1}{3}$

$1\frac{1}{4}$

$1\frac{1}{5}$

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$2\frac{1}{3}$

$2\frac{3}{4}$

$2\frac{1}{5}$

$1\frac{2}{7}$

$2\frac{1}{2}$

$2\frac{2}{3}$

$2\frac{1}{7}$

$1\frac{5}{8}$

$1\frac{4}{5}$

Name two of the above numbers that have a sum of $5\frac{1}{6}$.

Name: _____

What is the sum in simplest form?

$$\frac{1}{5} + \frac{3}{5}$$

What is $9 \div 4$ expressed as a mixed number?

Eric put 3 cups of flour and $\frac{3}{4}$ of a cup of sugar in a bowl. Then he mixed it. How many cups of mix does he have?

$$\frac{1}{100} =$$

PREVIEW

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What is the difference in simplest form?

$$\frac{5}{6} - \frac{1}{3}$$

\frac{2}{4}
"/>

\frac{1}{2}
"/>

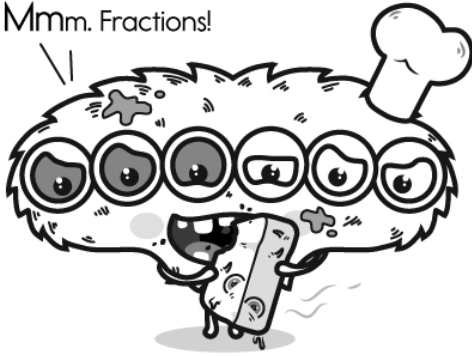
What is the difference in simplest form?

$$\frac{8}{15} - \frac{1}{5}$$

3

Name: _____

Mmm. Fractions!



SUBTRACTING UNLIKE FRACTIONS

- Make the **unlike** fractions into **like** fractions by finding the least common denominator (LCD).
- Shade the monster loaf slices to represent the greater fraction. Cross out the monster loaf slices to represent the lesser fraction.

EXAMPLE:

$$\frac{3}{4} - \frac{1}{8} =$$

$$\begin{array}{r} \times 2 \\ \downarrow \end{array} \quad \begin{array}{r} \times 1 \\ \downarrow \end{array}$$

$$\frac{6}{8} - \frac{1}{8} = \frac{5}{8}$$

LCD →

$$\frac{1}{2} - \frac{2}{5} =$$

$$\begin{array}{r} \downarrow \quad \downarrow \\ _ - _ = _ \end{array}$$

PREVIEW

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$$_ - _ = _$$

$$\frac{4}{5} - \frac{2}{3} =$$

$$\begin{array}{r} \downarrow \quad \downarrow \\ _ - _ = _ \end{array}$$

$$\frac{2}{3} - \frac{1}{2} =$$

$$\begin{array}{r} \downarrow \quad \downarrow \\ _ - _ = _ \end{array}$$

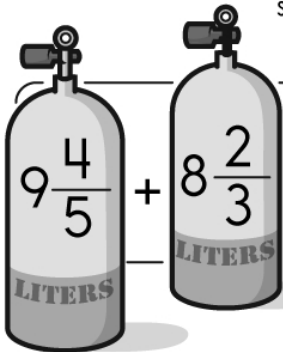
$$\frac{5}{6} - \frac{2}{9} =$$

$$\begin{array}{r} \downarrow \quad \downarrow \\ _ - _ = _ \end{array}$$

Name: _____

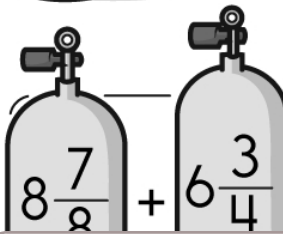
Adding Mixed Numbers

Professor Penelope is getting ready to send Mr. Snoots down for some daring, dark, deep-sea dives. She is checking the scuba tanks to make sure he has enough air for his big adventure. Help Professor Penelope by adding the mixed numbers, simplifying each sum if possible, and wishing Mr. Snoots *bon voyage*!



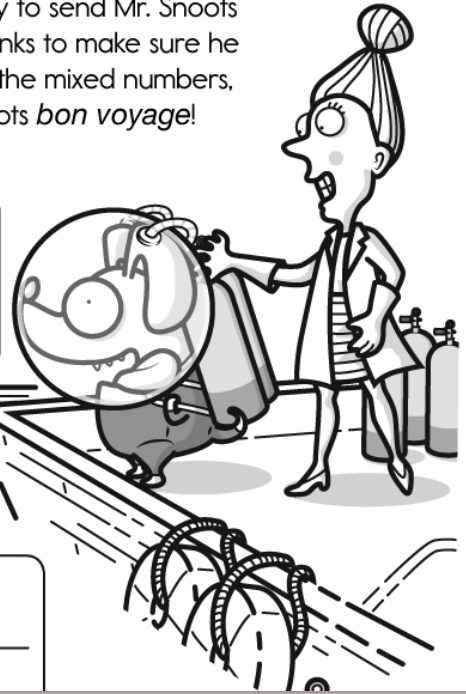
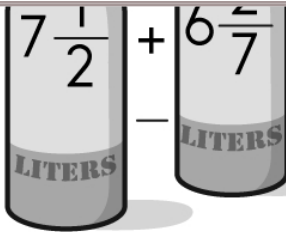
DIVE #1

$$9\frac{4}{5} + 8\frac{2}{3} = 9\frac{12}{15} + 8\frac{10}{15} = 17\frac{22}{15} = 18\frac{7}{15}$$



DIVE #2

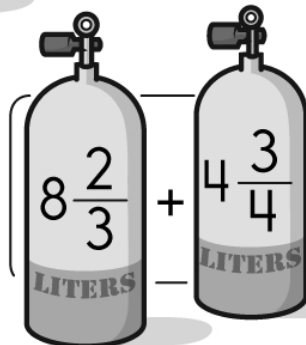
$$8\frac{7}{8} + 6\frac{3}{4} = \text{---} + \text{---} = \text{---} = \text{---}$$

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$$7\frac{1}{2} + 6\frac{2}{7} = \text{---} + \text{---} = \text{---}$$

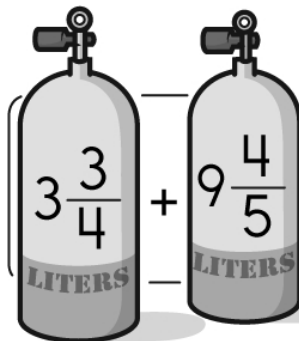


$$\text{---} + \text{---} = \text{---}$$



DIVE #5

$$8\frac{2}{3} + 4\frac{3}{4} = \text{---} + \text{---} = \text{---} = \text{---}$$



DIVE #6

$$3\frac{3}{4} + 9\frac{4}{5} = \text{---} + \text{---} = \text{---} = \text{---}$$

Mr. Snoots needs at least $13\frac{1}{2}$ total liters of air in each pair of tanks. Circle the tanks that need filling:

Dive #1 tanks Dive #4 tanks

Dive #2 tanks Dive #5 tanks

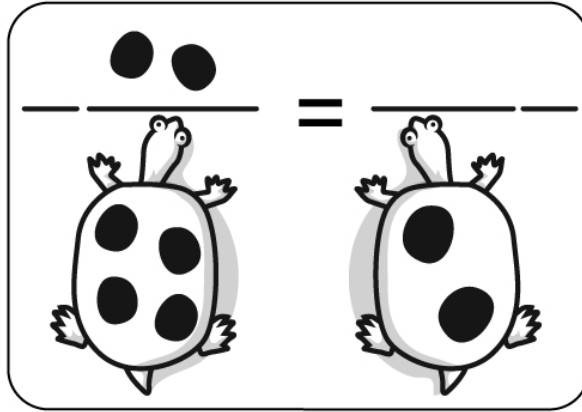
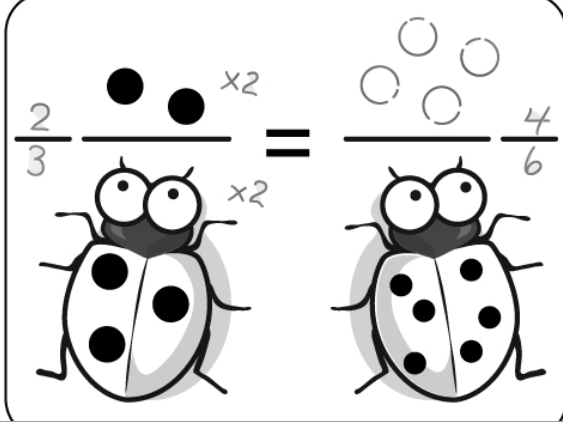
Dive #3 tanks Dive #6 tanks

Name: _____

UNLIKE FRACTIONS

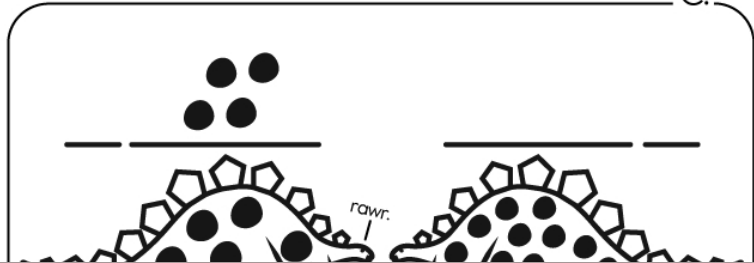
Draw spots to complete each pair of equal, unlike fractions, then write the fractions.

A.



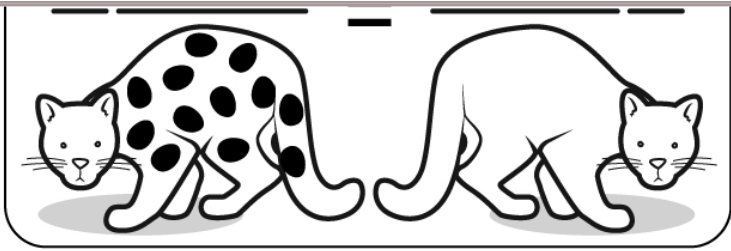
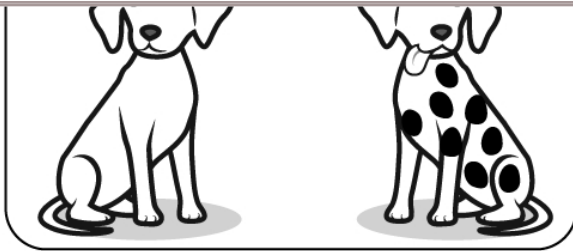
B.

C.

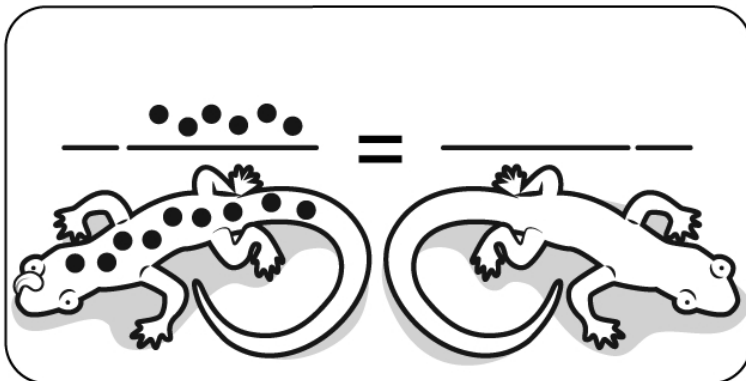


PREVIEW

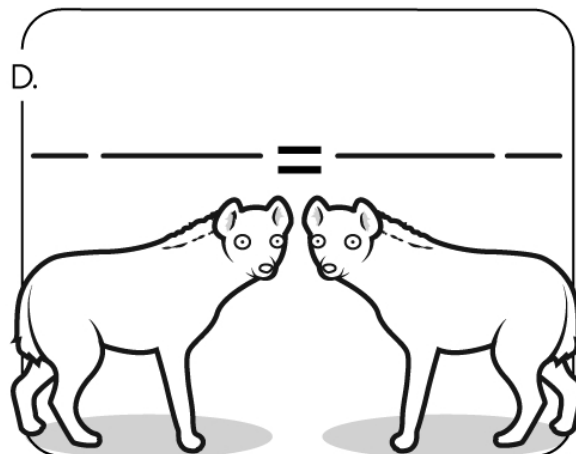
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Fill in an equal, unlike fraction:



Fill in any two equal, unlike fractions:



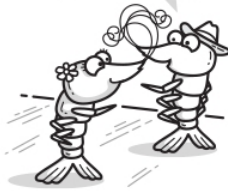
Name: _____

DIVIDING DECIMALS

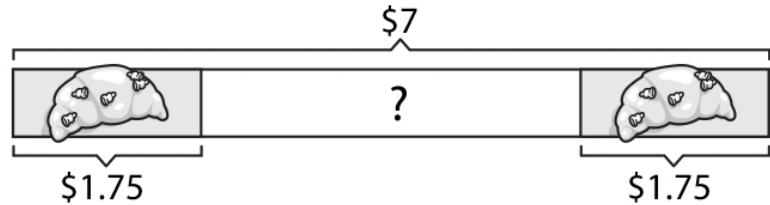
by Whole Numbers and Tenths



How many 1.75s are in 7?



1. The Shrimps are at **NAUTICAL NIBBLES BAKERY** to buy their favorite treat, cream-filled crustacean croissants. They brought \$7 with them and each croissant costs \$1.75. How many croissants can they buy?



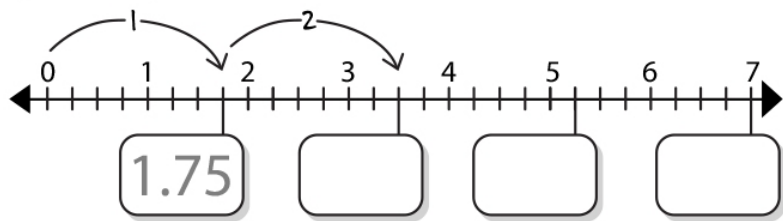
Fill in the blanks.

method 1

$$7 \div 1.75 = \frac{\boxed{7}}{\boxed{1}} \div \frac{\boxed{175}}{\boxed{100}}$$

$$= \frac{\boxed{7}}{\boxed{}} \times \frac{\boxed{100}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

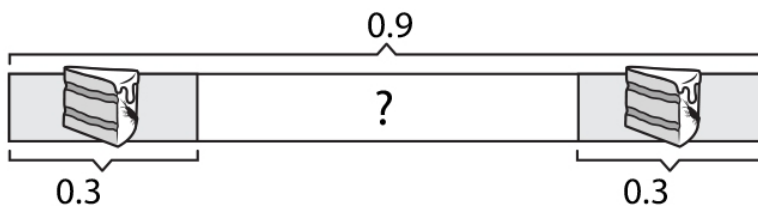
method 2



PREVIEW

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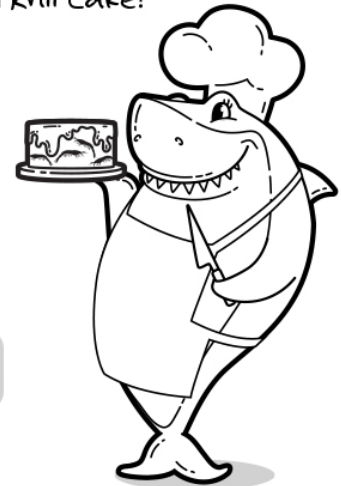
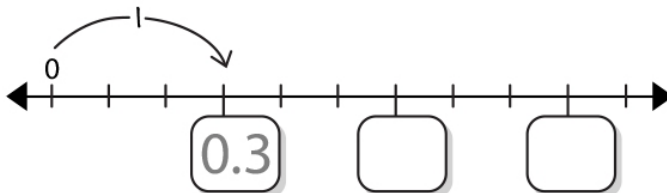
Sharlene is going to slice the cakes into 0.3 kilogram slices. How many slices will Sharlene get out of each krill Cake?



method 1

$$0.9 \div 0.3 = \frac{\boxed{}}{\boxed{}} \div \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} \times \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \boxed{}$$

method 2



Name: _____

The value of N is 3. What is the value of each of these expressions?

$$N + 238$$

$$N + N$$

$$N \times N - N$$

$$N + N \times N$$

PREVIEW

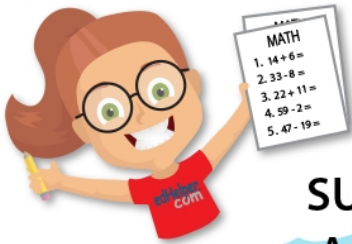
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goes to the right and y goes up. Plot these points: (4, 7), (4, 1), (7, 1), and (7, 7). What is the perimeter of the rectangle you drew?

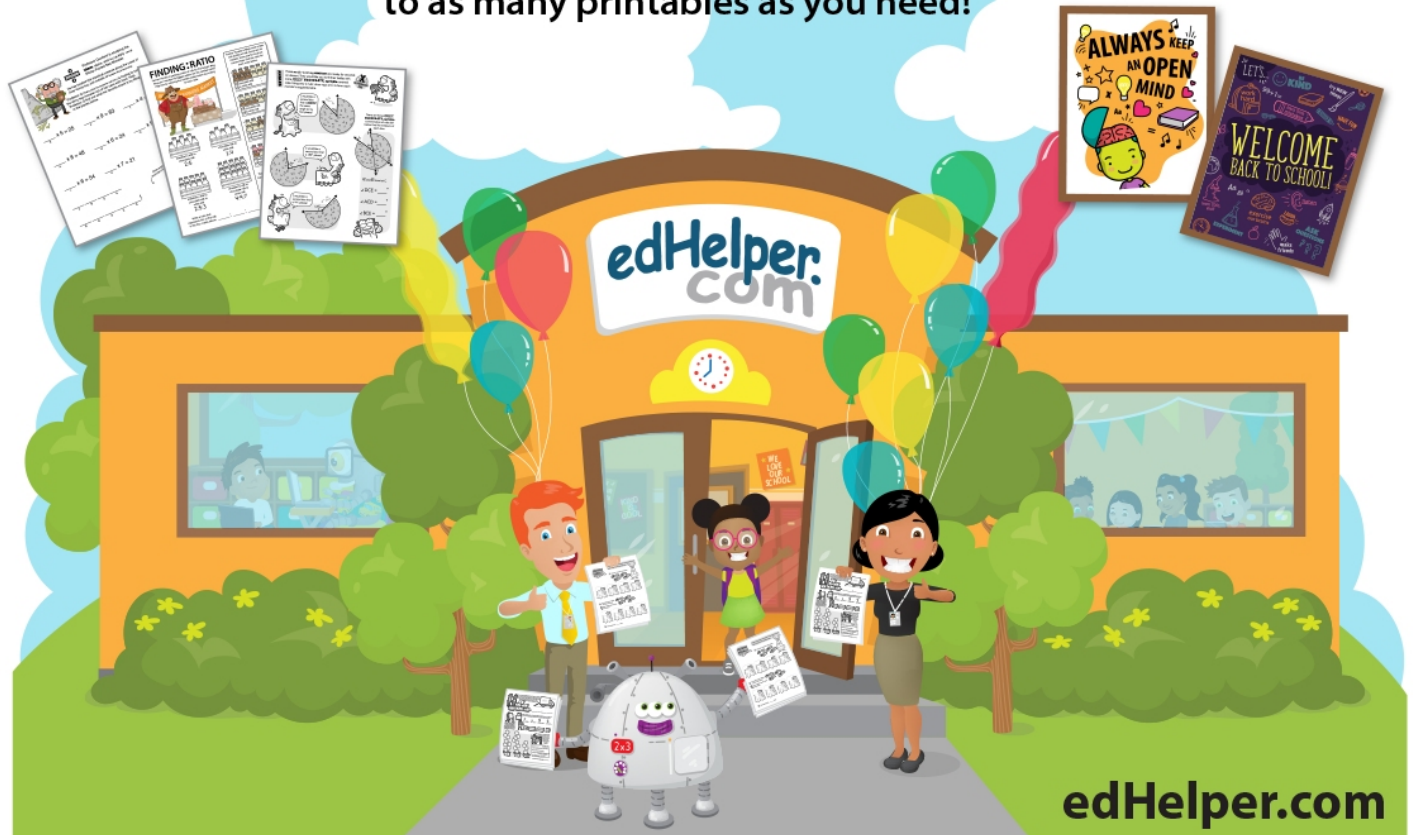
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Name: _____

Connect coin groups to make 70 cents. How many groups can you make?

7 nickels

1 nickel

9 nickels

2 nickels

2 dimes

65 pennies

1 dime

15 pennies

5 pennies

There are 3 birthdays in our class for the month of October. Justin, Jacob, and Erin all have birthdays. Erin is the last to celebrate. Her birthday is on the last day of the month. If you add the day numbers of the other birthdays, it equals the day number that Erin celebrates her birthday. The first person to celebrate is Justin. His birthday is 17 days before the next birthday. On what day numbers are each of their birthdays?

$$5 + 6 + 2$$

How many total legs are on 8 tigers?

$$358 + 7 =$$

Name: _____

Which two of the fractions have a difference of $\frac{1}{12}$?

$$\frac{1}{11}$$

$$\frac{8}{11}$$

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

$$\frac{5}{6}$$

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

Hunter was having so much fun making cupcakes for his class. He made $3\frac{5}{6}$ dozen of them! But there are only 18 kids in his class. Everyone ate one cupcake except for Holly, who does not like cupcakes. How many cupcakes are left over?

What is $\frac{2}{3}$ of 60? Show your work.