

# MONTHLY MATH CHALLENGE

## Homework

### May



My Name: \_\_\_\_\_

Do all of these,  
but skip 2 pages:

- |                                 |                                  |                                  |
|---------------------------------|----------------------------------|----------------------------------|
| <input type="checkbox"/> page 1 | <input type="checkbox"/> page 10 | <input type="checkbox"/> page 22 |
| <input type="checkbox"/> page 2 | <input type="checkbox"/> page 11 | <input type="checkbox"/> page 23 |
| <input type="checkbox"/> page 3 | <input type="checkbox"/> page 12 | <input type="checkbox"/> page 24 |
| <input type="checkbox"/> page 4 | <input type="checkbox"/> page 13 | <input type="checkbox"/> page 25 |
| <input type="checkbox"/> page 5 | <input type="checkbox"/> page 14 | <input type="checkbox"/> page 26 |
| <input type="checkbox"/> page 6 | <input type="checkbox"/> page 15 | <input type="checkbox"/> page 27 |
| <input type="checkbox"/> page 7 | <input type="checkbox"/> page 16 | <input type="checkbox"/> page 28 |
| <input type="checkbox"/> page 8 | <input type="checkbox"/> page 17 |                                  |
| <input type="checkbox"/> page 9 | <input type="checkbox"/> page 18 |                                  |
|                                 | <input type="checkbox"/> page 19 |                                  |
|                                 | <input type="checkbox"/> page 20 |                                  |
|                                 | <input type="checkbox"/> page 21 |                                  |

Find a helper.

He/she helped by checking my work.

**Hand in by May 31.**

Feel free to hand in early!



**Name:** \_\_\_\_\_

Samantha is planning to drive to Erin's house. She hasn't seen Erin since last summer. Her house is 138 miles away. The gas tank on Samantha's car can hold 16 gallons of gas. On average the car will go 25 miles on one gallon of gas.

Right now the gas tank is showing that it is one-third full (or two-thirds empty!).

Can Samantha make it to Erin's house without getting gas first? Do you think she should get gas?

Show your work.

**Name:** \_\_\_\_\_

Scarlett plays soccer before breakfast, after school, and before bed. She loves soccer!

"What's the most you ever juggled?" asked her brother Bobby.

"Twenty more than you have ever juggled," laughed Scarlett.

Bobby was steaming red. He practiced all week but was only able to beat his high score by one-third. Even with that improvement, he was still ten away from Scarlett's high juggling score.

What is the most Scarlett has ever juggled?

Show your work.

Name: \_\_\_\_\_

Complete each pattern, using the same rule. Write what the rule is.

Z, W, \_\_\_\_, \_\_\_\_, N, K, H, E, B

\_\_\_\_, \_\_\_\_, R, \_\_\_\_, \_\_\_\_, I, F, C

Complete each pattern. Write what the rule is.

96	88	80
72	64	
48	40	
24		8

Name: \_\_\_\_\_

Peter is taking a 24-hour walk challenge. He is trying to stay awake for 24 hours and plans to walk as far as he can. Each hour he plans to sit and rest for only 5 minutes. If he is able to do this, how long will he spend walking and not resting during the 24 hours?

\_\_\_\_\_ hours and \_\_\_\_\_ minutes

Rosa is buying candy mixes for goodie bags. Each fun mix packet weighs 4 ounces. She purchased 6 pounds. How many packets did she buy?

(Hint: 1 pound = 16 ounces)

Nathan thought he would never finish cooking. He made 108 muffins, of which  $\frac{1}{4}$  were chocolate and the rest were vanilla. How many chocolate muffins did he make?

**Name:** \_\_\_\_\_

Emily just started a job using her bicycle to pick up groceries and deliver them to people in her neighborhood. Once a grocery order is placed on DriveFoodApp, Emily will go pick up the groceries and then deliver them. She has to pay the DriveFoodApp 20%. If the delivery fee is \$50, then Emily has to give the DriveFoodApp company 20% of that. She gets to keep the rest. Today, she had time to do 5 deliveries. The delivery fees were \$15, \$12, \$20, \$18, and \$22. "Don't forget sometimes people tip," adds Emily. "And I get to keep the entire tip." Oh. Sorry! She got tips of \$2, \$3, \$5, \$10, and \$1. How much money did Emily make on deliveries today?

Show your work.

Name: \_\_\_\_\_

The number 7500 is the smallest whole number that when rounded to the nearest \_\_\_\_\_ will be 8000.

Use any of these digits. Cross off a digit after you use it.

**4      3      8      3      1      0      8      1      7      7**

What is the smallest number greater than 400,500 that you can make from these digits?

Amy lives in Mexico City where it is currently Sat. at 11:15 a.m. She made a phone call to Rose who lives in Helsinki. It is 7:15 p.m. and Sat. in Helsinki. What is the difference in time?

**Name:** \_\_\_\_\_

It was Mrs. Johnson's birthday, and she made her favorite homemade cookies to share with the class.

"I hope you all enjoy my homemade cereal crunch cookies. I used a mixture of different cereals to make this. Unique!" says Mrs. Johnson as she saw Joshua raise his hand. "But don't worry! They are all nut free."

The class LOVED them. In no time at all the class ate five-sixths of the cookies.

"Mrs. Johnson," said Hannah, "you need to do OUR tradition. While we sing happy birthday, you need to eat as many cookies as you can."

As the class began to sing, that is just what Mrs. Johnson did. And she was good at it! She ate three-fourths of the cookies that were left. In case you are curious, that was equal to 3 cookies! How many cookies did Mrs. Johnson bring to class that day?

Show your work.



**Name:** \_\_\_\_\_

On May 5, 1961, Alan Shepard became the first American in space. His flight lasted 15 minutes, 28 seconds, and he reached an altitude of 116 miles above the Earth.

On May 5 of this year, how many days ago was it that Alan Shepard went into space? To make this easier, just assume 365 days per year and ignore leap days.

How many seconds did Shepard's flight last?

There are 0.62 miles in 1 kilometer. How many meters above the Earth did Shepard orbit?

 I did page 9 I decided to skip this page  
edHelper

Name: \_\_\_\_\_

Get a fidget spinner! Spin it.

I needed to spin \_\_\_\_\_ time(s) to finish.

 $t - 10 + t = 24$   
What is the value of  $t$ ?What is the greatest  
common factor of the  
numbers 91 and 104?

Circle the greatest amount:

40%

0.18

 $\frac{11}{25}$  $|-10| - x = 2$  $x =$  $(11 + 3 + 5) =$ 

Simplify.

 $\frac{3,000}{9,000} =$ 

Dr. Rock discovered a new planet. As he explains it, this new planet has a diameter that is 8.22 times that of Earth's. If Earth's diameter is 12,756 kilometers. What is this new planet's diameter?

Crazy Peter had pizza 15 days in the month of January. What percent of the month did he have pizza?

8, 15,  $8\frac{1}{4}$ ,  $15\frac{1}{4}$ ,  $8\frac{1}{2}$ ,  
\_\_\_\_\_,  $8\frac{3}{4}$ ,  $15\frac{3}{4}$ , 9,  
16,  $9\frac{1}{4}$ ,  $16\frac{1}{4}$ ,  $9\frac{1}{2}$

 $3 \times (32 \div 4) - 24 \div 8 =$ 

70, 74, 78, 82, 86,  
\_\_\_\_\_, 94, 98, 102, 106

Circle the percentage that  
is closest to 37 out of 50:

7%

33%

70%

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edHelper

Name: \_\_\_\_\_

Spin again.

I needed to spin \_\_\_\_\_ time(s) to finish.

$$9 + 2 \times 6$$

$$\frac{2}{7} \times \frac{4}{7}$$

$$(12 \times 9) - 11$$

If  
10,000,000  
=  $10^x$ , then what is the  
value of  $x$ ?

Find the least common  
denominator for the  
fractions  $\frac{3}{6}$  and  $\frac{6}{12}$ .

What is the remainder of  
22 divided by 4?

60, 70, \_\_\_\_\_, 90, 100,  
110

$$698 \div 10$$

Use  $>$ ,  $<$ , or  $=$  to complete.

$$72\% \text{ --- } \frac{3}{11}$$
$$\frac{1}{11} \text{ --- } 72\%$$
$$32\% \text{ --- } \frac{2}{6}$$

Rewrite as an algebraic  
expression or equation.

The quotient of  $j$  and 13 is 3.

$$\frac{6}{9} \times \frac{1}{5}$$

Rewrite  $\frac{7}{50}$  as a  
decimal.

Name: \_\_\_\_\_

Complete each pattern.

3, 2, 9, 9, \_\_\_\_, \_\_\_\_, 2, 9, 9, 1, 3, 2, 9, 9, 1, 3

h, h, 7, 7, 4, 0, h, h, 7, 7, 4, 0, h, h, \_\_\_\_, 7

j, 2, 2, 6, w, w, \_\_\_\_, \_\_\_\_, 2, 6, w, w, j, 2, 2, 6

Complete each pattern, using the same rule. Write what the rule is.

Y, V, S, \_\_\_\_, \_\_\_\_, J, G, D, A

Z, W, T, \_\_\_\_, \_\_\_\_, K, \_\_\_\_, \_\_\_\_, B

Complete each pattern, using the same rule. Write what the rule is.

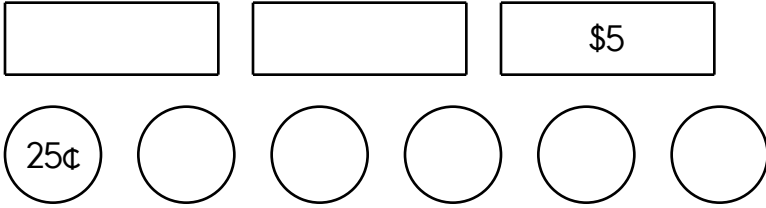
4, 7, 7, 7, 7, 7, 4, 7, 7, 7, 7, 7, 7,

4, 7, 7, 7, 7, 7, 7, 7, 7, 7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,

Name: \_\_\_\_\_

Make change. You can use \$20, \$10, \$5, \$1, 25¢, 10¢, 5¢, or 1¢.

Make \$35.43 using bills and coins.



Show a different way to make \$35.43 using a different number of bills or coins.

Make \$52.36 using bills and coins.

Show a different way to make \$52.36 using a different number of bills or coins.

Write as a decimal.  
Nine and twenty-one  
hundredths

Write as a decimal.

$$\frac{5}{100}$$

Write as a decimal.

$$14 \frac{4}{10}$$

Name: \_\_\_\_\_

Mrs. Leema is in charge of ordering pizza at her school for all the kids on pizza Tuesdays. Each child is billed \$4 per week if they want to join the pizza program. They get 2 slices of pizza, a small drink, and a healthy snack.

"Please order at least 2 extra pies this week," instructs the principal. "Last week we somehow ran out!"

There are 198 kids at the school. Almost everyone is on the pizza program, as only 15 kids are not a part of it.

"Yeah," interrupts Jacob. "I don't like pizza. I prefer octopus."

"Uhh, gross," replies Jenny.

"He's kidding!" replies the principal.

Mrs. Leema needs to order the pizza from Anthony's. They make the best pizza in town.

Each pie comes with 9 slices.

How many pies should Mrs. Leema order?

If the pies cost \$8.49 each, how much will that be?

Name: \_\_\_\_\_

Time and again Ms. Jackson visited the museum. Tuesday she arrived at the museum at 12:45 p.m. She spent 1 hour and 29 minutes looking at the exhibits, 11 minutes in the gift shop, and 49 minutes in the teahouse before she left. What time did Ms. Jackson leave the museum?

Kevin played a joke on his father. On Mirth Day Kevin planted 13 potato plants in his father's garden. He watered the plants and took care of them until the potatoes were ready to dig up. His father was very proud of him. Then he saw the potatoes. There were 11 purple potatoes on each plant! How many purple potatoes were there in all?

Sally bought a kit to make fidgets. The box says that you can make up to 36 fidgets. Sally tried to make one. It took her 40 seconds to make. How many fidgets can she make in an hour? Assume she takes a 10-second break after making each fidget.

What is the missing fraction?

$$\frac{2}{7} + ? = 1\frac{2}{21}$$

Name: \_\_\_\_\_

5145 is how much more  
than 7316?

$$\begin{array}{r} 50,806 \\ - 48,967 \\ \hline \end{array}$$

$$\begin{array}{r} 70,584 \\ - 49,713 \\ \hline \end{array}$$

$260 + 51 =$

Subtract 895 from 4032.

$$\begin{array}{r} 7,004 \\ - 1,388 \\ \hline \end{array}$$

Divide and write  
remainder.

$$\frac{42}{8} =$$

$$20 \overline{) 760}$$

$$2 \overline{) 703}$$

Divide and write remainder.

Divide and write remainder.

$$\begin{array}{r} 812 \\ + 74 \\ \hline \end{array}$$

$$\begin{array}{r} 572 \\ - 511 \\ \hline \end{array}$$

Subtract 95 from 621.

$$\begin{array}{r} 6,780,340 \\ - 85,636 \\ \hline \end{array}$$

$$\begin{array}{r} 683 \\ - 25 \\ \hline \end{array}$$

$$\begin{array}{r} 739,474 \\ - 54,216 \\ \hline \end{array}$$



**Name:** \_\_\_\_\_

Anthony's received your pie order. (I hope you ordered enough pies so everyone will get 2 slices. And you didn't forget about the 2 extra pies did you?)

Anthony's pies are world famous. They use exactly 6.5 oz of cheese on each pie. How many pounds of cheese will Anthony's use for this order?

Mrs. Leema picks up drinks at the supermarket. They are \$2.34 for 20-packs. They can only be purchased as 20-packs. How much will that be?

She also gets healthy snacks. The healthy snacks came to a total of \$57. Will Mrs. Leema collect enough money from the children on the program? If she does, how much is left over? If she doesn't, how much will she be short that the school will need to reimburse?

Name: \_\_\_\_\_

Cross off the number that does NOT belong.

9, 18, 23, 27, 36, 45, 54, 63, 72

Why does \_\_\_\_\_ not belong in the pattern?

Cross off the number that does NOT belong.

787112, 127871, 711278, 787112, 127871, 711278, 787112, 127871,  
711278, 787112, 127871, 127871, 711278, 787112, 127871

Why does \_\_\_\_\_ not belong in the pattern?

Name: \_\_\_\_\_

$60\frac{3}{5}$	$-\frac{1}{2}$				$+41$		$+1\frac{1}{2}$	
			$-8\frac{1}{2}$				$+\frac{3}{5}$	$+17$
			$+46$				$+7\frac{1}{2}$	$-\frac{2}{5}$
	$-34$					$28\frac{4}{5}$	$+4$	
$-19$							$+\frac{1}{5}$	$+16$
			$-\frac{3}{5}$	$+9$				$-24$
						$-\frac{4}{5}$	$+53$	$168\frac{1}{5}$

$132 \div 12 =$	<p>Max invented a robotic bug. The bug can crawl five centimeters in sixteen seconds. How long would it take the bug to crawl forty centimeters?</p>	$\begin{array}{r} 795 \\ - 657 \\ \hline \end{array}$
$\begin{array}{r} 25 \\ + 41 \\ \hline \end{array}$		



**Name:** \_\_\_\_\_

Metro Messenger Service delivered one million, thirty-six thousand, seven hundred messages last year. Write that number in standard form.

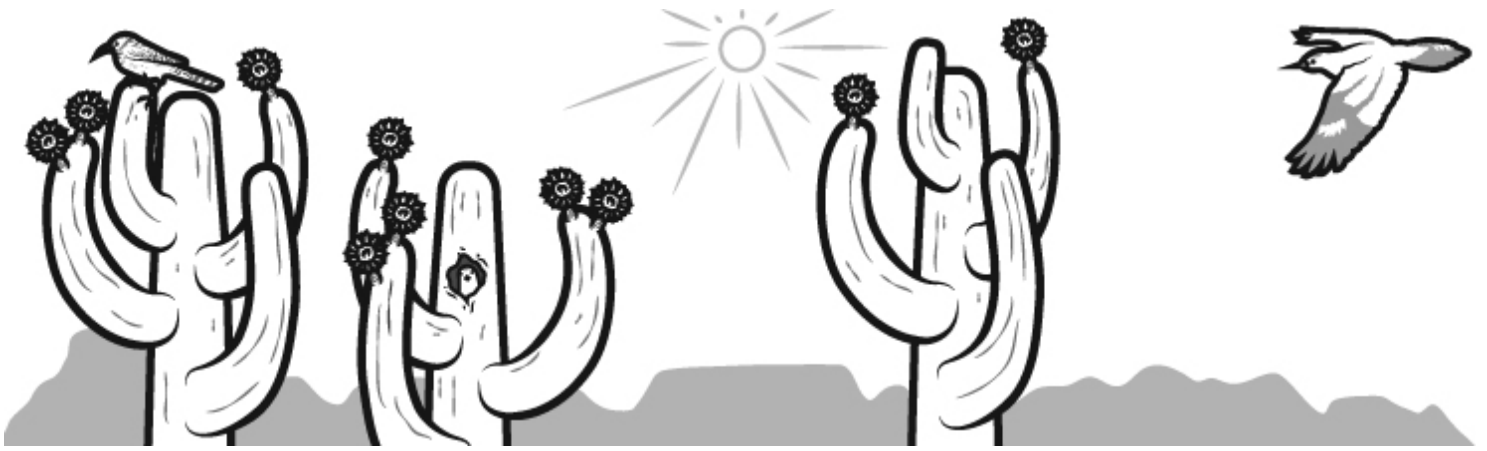
The total attendance at the Winter Wonderland Festival was thirty-eight thousand, two hundred thirty-six. Write this number in standard notation.

The Police Week 5K race attracted runners from all over the Southeast. Kevin Thompson, the winner, had a time of 14:30. The second place time was 16:04. How much faster was the winner than the second place finisher?

I did page 20

I decided to skip this page  
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Name: \_\_\_\_\_



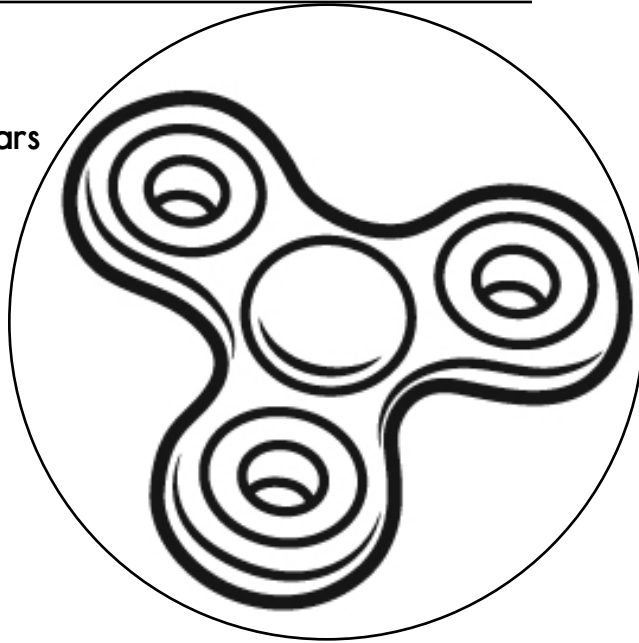
Write your own math problem here.

Ask the person who helped you to try to solve your problem.

Name: \_\_\_\_\_

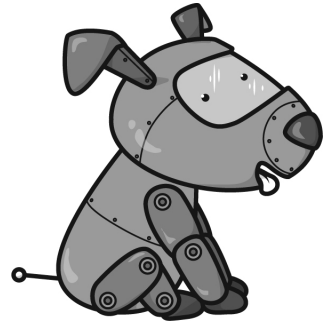
## Directions:

Use the rule that  
1 human year = 7 dog years  
to fill in the blanks.



How many times  
do you need to spin?

I needed to spin \_\_\_\_\_  
time(s) to finish the page.



Spin fidget spinner. Quick!

I needed to spin \_\_\_\_\_ time(s) to finish.

Human Years: 5Dog's Age: 35Human Years: 9.6

Dog's Age: \_\_\_\_\_

Human Years: 1.9

Dog's Age: \_\_\_\_\_

Human Years: 3.8

Dog's Age: \_\_\_\_\_

Human Years: 10

Dog's Age: \_\_\_\_\_

Human Years: \_\_\_\_\_

Dog's Age: 49Human Years: 11.2

Dog's Age: \_\_\_\_\_

Human Years: \_\_\_\_\_

Dog's Age: 84Human Years: 10.3

Dog's Age: \_\_\_\_\_

Human Years: \_\_\_\_\_

Dog's Age: 51.8

Human Years: \_\_\_\_\_

Dog's Age: 42

Human Years: \_\_\_\_\_

Dog's Age: 81.9

Human Years: \_\_\_\_\_

Dog's Age: 14.7Human Years: 1.5

Dog's Age: \_\_\_\_\_

Human Years: 9

Dog's Age: \_\_\_\_\_

Human Years: 6.4

Dog's Age: \_\_\_\_\_

Human Years: \_\_\_\_\_

Dog's Age: 86.1Human Years: 8

Dog's Age: \_\_\_\_\_

Human Years: \_\_\_\_\_

Dog's Age: 25.2

Human Years: \_\_\_\_\_

Dog's Age: 56

Name: \_\_\_\_\_

Justin lined up 8-inch long blocks next to each other. He had 26 of these blocks.

Now Billy wants to make the same length but use 4-inch blocks. How many 4-inch blocks will he need to use?

Amy needs to make 30 sugar cookies for a big party, but her favorite recipe is only for 10 cookies. The recipe calls for  $1\frac{3}{4}$  cups of sugar. How much sugar will she need to use?

Sarah drew a square. She said, "My square's perimeter is 60 cm more than its area." Ava wants to draw the same square but is confused. "You can't subtract area from perimeter," she replied. Ava knows the area should be in square centimeters and perimeter is in centimeters. Sarah just thought they were both in centimeters. Can you figure out how long each side of her square is?

Name: \_\_\_\_\_

Hannah got a summer job working on an app where people post pictures of their pets. This week they had 1,000,000 pictures posted. Of those pictures, 49% were dogs. How many pictures of dogs did they get this week?

Rewrite this mixed number as an improper fraction.

$$5 \frac{7}{11}$$

What is the greatest common factor of the numbers 80 and 144?

$$|-14| + g = 7$$

$$g =$$

$$9 + (72 \div 6) - 44 \div 4 =$$



Name: \_\_\_\_\_

Twenty-four percent of the plants in the park are broad-leaved plants and the rest are grasses. What percent of the plants are grasses?

Connor has a record of winning 2 boxing matches for every 3 he loses. If he had 43 matches during the last year, how many did he win?

If the ratio of red flowers to yellow flowers in the local park is 8:4 and there are approximately 700 red or yellow flowers currently blooming in the park, about how many of them are yellow? You may need to round to the nearest whole number.

Gavin made seven pepperoni pizzas for a party. He cut the pepperoni himself from a sausage that was 14 inches long and  $1\frac{1}{2}$  inches in diameter. The pizzas were each 16 inches in diameter. His friend Amy is a real math whiz (a math freak some say) and took the opportunity to calculate what percent of the total pizza surface area was covered by pepperoni. The pepperoni was cut into slices  $\frac{1}{8}$  of an inch thick. Each pizza has the same number of whole pepperoni slices. (He ate any extra pepperoni!) What percent of the total pizza surface area was covered by the pepperoni? Round your answer to the nearest hundredth.

Name: \_\_\_\_\_

$$\begin{array}{r} 2.06 \\ \times 0.2 \\ \hline \end{array}$$

$$\begin{array}{r} 5.492 \\ - 4.8 \\ \hline \end{array}$$

$$\begin{array}{r} 2.98 \\ \times 5.4 \\ \hline \end{array}$$

Use &gt;, &lt;, or = to complete.

$490 \text{ \_\_\_ } 486.9$

$242.94 \text{ \_\_\_ } 243$

$29.85 \text{ \_\_\_ } 29.5$

$19.37 \text{ \_\_\_ } 19.4$

$206 \text{ \_\_\_ } 204.41$

$13.900 \text{ \_\_\_ } 13.9$

$27.21 \text{ \_\_\_ } 27.5$

Convert to a fraction or mixed number and simplify.

$$\begin{array}{r} 11,131.7 \\ 59,381 \\ 1,936 \\ + 91,369,388 \\ \hline \end{array}$$

Write each as a decimal.

$14 \frac{49}{100} =$

$16 \frac{33}{100} =$

$16 \frac{2}{10} =$

$6 \frac{81}{100} =$

$19 \frac{12}{100} =$

$15 \frac{6}{10} =$

Write the decimal in words.

13.7

Change  $\frac{5}{10}$  to a decimal.

Name: \_\_\_\_\_

Write the reciprocal.

10

Write the reciprocal.

 $\frac{1}{4}$ 

Write the reciprocal.

 $\frac{1}{2}$ 

$$4 - \frac{1}{3} + \frac{5}{12} =$$

Reduce  $\frac{6}{44}$  to its lowest terms.Reduce  $\frac{81}{171}$  to its lowest terms.

$$7 + \frac{3}{5} - \frac{6}{7} =$$

Write the reciprocal.

8

Write the reciprocal.

 $\frac{8}{23}$ 

$$\frac{3}{11} \times 3\frac{8}{9} =$$

$$4\frac{1}{3} \times 4\frac{3}{5} =$$

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

$$4 + \frac{1}{4} + \frac{1}{3} =$$

Reduce  $\frac{45}{63}$  to its lowest terms.Reduce  $\frac{40}{80}$  to its lowest terms.

Name: \_\_\_\_\_

$$\begin{array}{r} 79,925 \\ - 5,308 \\ \hline \end{array}$$

$$\begin{array}{r} 495 \\ - 299 \\ \hline \end{array}$$

$$\begin{array}{r} 914,526 \\ - 351,159 \\ \hline \end{array}$$

Write the reciprocal.

13

$$13 - \frac{4}{7} - \frac{1}{3} =$$

Write the reciprocal.

$$\frac{3}{12}$$

$$100 \times 6.6 =$$

Write the decimal number  
for:  
seven hundredths

$$\begin{array}{r} 8.8 \\ \times 12.1 \\ \hline \end{array}$$

$$\begin{array}{r} 5,634.44 \\ 5,747.9 \\ 8,132.22 \\ + 7,438.9 \\ \hline \end{array}$$

$$0.026 \overline{) 0.10374}$$

Rewrite as a vertical  
equation and solve.

$$\begin{array}{r} 456.279 + 456.279 + 147.465 \\ + 5.5 + 467.97932 \end{array}$$

Name: \_\_\_\_\_

Fill in each box of the edHelperKu puzzle, using the numbers from 1 to 5.

Every row must contain the numbers 1, 2, 3, 4, and 5.

Every column must contain the numbers 1, 2, 3, 4, and 5.

In a cage with a plus sign, the given number will be the sum of all the digits in the cage.

In a cage with a subtraction sign, the given number will be the difference. The largest number will always be the box with the clue.

3	3-	15+		1
16+		2-		
	2-	1	4	3-
4		2-	3	
		1-		3
		2		

Fill in the blanks. These equations are from the puzzle above.

$___ - 1 = 2$

$5 - ___ = 3$

$___ + ___ + ___ + 4 + ___ = 16$

$___ - 3 = 2$

$3 - ___ = 2$

$2 - ___ = 1$

$___ + ___ + 5 + ___ = 15$

$___ - 2 = 3$