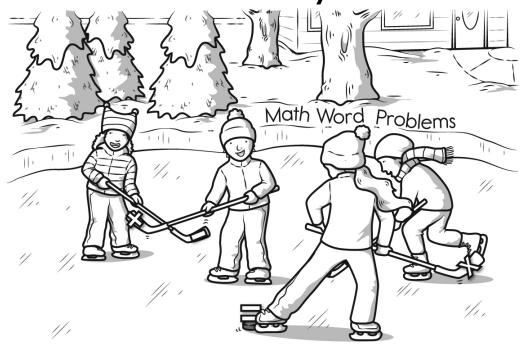
MONTHLY MATH CHALLENGE

Homework

February



My Name: _____

Do all of these,	page 10	page 22
but skip 2 pages:	page 11	page 23
1 1 3	page 12	page 24
page 1	page 13	🗌 page 25
page 2	page 14	page 26
page 3	page 15	page 27
page 4	page 16	page 28
page 5	page 17	page 29
page 6	page 18	page 30
page 7	page 19	page 31
page 8	page 20	page 32
page 9	page 21	

Find a helper to double-check your work. Write their name:

Hand in by February 29.

Feel free to hand in early!

Get a fidget spinner! Spin it.

I needed to spin _____ time(s) to finish.

$$\frac{3}{10}$$
 x $\frac{9}{10}$

What is the greatest common factor of the numbers 120 and 30?

The angles in a quadrilateral measure 112°, 105°, 75°, and g°. What is the value of g?

Crazy Max had pizza 13 days in the month of October. Approximately what percent of the month did he have pizza?

$$\frac{1}{4096}$$
, $\frac{1}{512}$, $\frac{1}{64}$, $\frac{1}{8}$, (1), (8), ..., (512), (4,096), (32,768)

The letter V has an unknown value. If you multiply V by twenty, the product is four. What value does V have?

$$8 + 42 \div 6 - 36 \div 9 =$$

If m = 9 and z = -21 then what is the value of h? 9m - 8z + 4z = h

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1 2 1 2 3	 edHelper

Name: _

Write the decimal number for:

one hundred forty-seven and nine hundred twenty-six thousandths Write the decimal in words. 16.55555

Rewrite as a vertical equation and solve. 15.4 - 14.62 =

An estimated 21,101 people attended the state championship football game. If 10,312 were female, how many were male?

The Russian Revolution began on November 7, 1917. Today the date is celebrated as the Day of Consent and Reconciliation. On November 7, 2024, how many years will have passed since the beginning of the Russian Revolution? Mr. Allen said that 4,597 people attended the basketball game last Friday. This Friday 4,491 people attended the game. Write an integer to represent the decrease in attendance.

Eric measured a small stick with his ruler. It was a metric ruler divided into millimeters. He found that the stick was 83-units long. (A unit being the smallest division on his ruler.) How many centimeters long was the stick?

Peter took a bicycle trip on a Saturday afternoon. Now, knowing that there are 100 centimeters in a meter, and 1,000 meters in a kilometer, how many centimeters did he ride if his trip was 3.8 kilometers long? Jacob asked 10 students how many hot dogs they had eaten during June. The answers were 5, 6, 2, 4, 7, 3, 5, 2, 6, and 3. What is the range of his data?

(15 + 11 + 14) =

Circle the greatest amount: 24%

0.37

8 25 If 4x = 76, then x =

edHelper.com/math_workbooks.htm

Mr. Thompson bought 16 sparklers for his children to use on American Independence Day. There are 4 each of red, blue, silver, and gold. The children drew them out of the bag randomly. What is the probability that Hannah, the first child to draw, drew a gold sparkler?

Ava and her mother made three spaghetti pies. They planned to use one for dinner and put the other pies in the freezer. The recipe calls for $1 - \frac{1}{3}$ cups of spaghetti sauce for each pie. How many cups of spaghetti sauce will they need for all three pies?

A rectangular playground at Bigtown Middle School has a perimeter of 576 meters, and one of the sides is 110 meters long. What is the area of the playground?

Alex was left with a result of 44 after he multiplied a number by 2 and subtracted 18. What number did he start with?

Adam cut an old blanket into strips to weave into a rug. The strips were 6 feet long and 1 inch wide. He had 38 strips. What were the dimensions (in feet and inches) of the rug before he cut it up?

|-12| - c = 6

c =

(0.7)(0.14)

Rewrite $\frac{18}{25}$ as a decimal.

	I did page 5 I decided to skip this page
Name:	edHelper
Hannah has a total of thirty-eight nickels and dimes. If Hannah had twelve more nickels, the total value of the coins would be \$3.50. How much money does she have?	Hannah's quarters total \$9.30 more than her nickels. Her nickels total \$0.46 more than her pennies. The total value of the coins is \$10.94. How many of each coin does she have?
Matthew has pennies, nickels, and dimes. He has a total of \$6.25. He has ten more pennies than dimes and six times as many nickels as dimes. How many of each coin does he have?	Devin has three fewer quarters than nickels. Devin has a total of thirty-nine nickels and quarters. At the mall, Devin spent twelve nickels and eight quarters. How much money does he have left?

	I did page 6 I decided to skip this page
Name:	edHelper
Kayla took a certain number of dimes from Timothy. She then gave Timothy the same number of quarters in return. Kayla had \$1.95 more than she had before the exchange. What was the number of quarters that Kayla gave Timothy?	Courtney has seven fewer nickels than dimes. Courtney has a total of fifty-seven nickels and dimes. How many of each coin does she have?
Jennifer has a total of thirty-two pennies and quarters. She has twelve more quarters than pennies. How much money does she have?	Nicole's quarters total \$18.39 more than her pennies, of which she has one-fifth as many as she has dimes, which total \$0.75 less than her quarters. How many of each coin does she have?

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Name: _

Divide and write remainder.

Divide and write remainder.

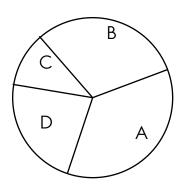
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							I did page 8 I decided to skip this page 8 edHelper
lan	ne:						
5 18	6 7	21 22			14 15 27 28		You may use pennies, nickels, dimes, or quarters for the coins. a. Pick 5 coins that add up to 105 cents.
		ttern co would lo		s, color	how th	nese	b. Pick 5 coins that add up to 18 cents.
a. [31	32	33	34	35	36	c. Pick 5 coins that add up to 70 cents.
b. [72	73	74	75			
o. [c. [113	114	115	116	117]	d. Pick 5 coins that add up to 85 cents.
L			1			_	

The hour hand on a clock started at 4 a.m. By the time the hour hand on the clock moved to 2 p.m., how many degrees did it move?

Robert baked cookies to give away in his morning class. They are mini cookies with a mix of candy inside. Some have sour candies, and some have chocolate chips. Since they are so tiny, he gave everyone in his class five cookies. He had seven cookies leftover. He actually wanted to give everyone six cookies, but he was twelve cookies short to do that. How many total cookies did he bake?

I did page 9	I decided to skip this page edHelper
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This circle has been split up into four parts. Approximately what percent is each of the letters? You do not need to be exact, but your answers should make sense.

$$A + B + C + D = 100\%$$

When you divide 40 by 7, you will get a quotient of 5 with a remainder of 5.

How many other different remainders can you get if you divide other whole numbers by 7? Give an example of each.

Wendy wrote the following program to convert a temperature in Fahrenheit to Celsius.

temp = float(input("Enter temperature in Fahrenheit: "))
celsius = (temp - 32) * 5/9
celsius = round(celsius)
print ("celsius = ",celsius)

The program takes an input, then it converts the Fahrenheit to Celsius. Finally, it rounds the number to the nearest integer. What would be printed for these inputs:

a. 68

b. 32

Write a math story word problem for which the answer is 7 remainder 5 and uses the names Connor and Max.

	I did page 10 I decided to skip this page edHelper
Name:	
Mr. Bloop likes to hit fly balls to his nephew on Saturday afternoons. His nephew catches about three out of every five fly balls hit to him. If Mr. Bloop hits 75 fly balls, how many will he probably catch?	Near the end of the Ordovician period (about 430 million years ago), the Earth's sea level is thought to have been about 400 feet above the current sea level. If the Earth's current sea level rose by 17 feet, what would the difference in sea level be, compared to the sea level near the end of the Ordovician period?
If lava flows out of Mount Gustaffson at a rate of 45 cubic meters per day, how much lava will have flowed out after 6 weeks?	In a dry riverbed near the town of Turkey, the gravel is fossiliferous. In fact 3% of every rock found in the bed is a whole or part of a fossil marine organism. If you collected 452 rocks from the bed, about how many of them would you expect to be fossils?
Amy rode her bike around the hike and bike trail for half an hour and averaged 16 miles per hour. Jenna rode her bike around the trail and traveled 10 miles in 34 minutes. What was the difference in their average speeds? Round your answer to the nearest tenth.	The Bigtown Middle School baseball team has room for 20 players. Twelve have been chosen. If there were 29 players trying out for the team, how many of those remaining will not be chosen?
If the perimeter of an equiangular triangle is 21 centimeters, what is the length of one of its sides?	Which is bigger, half of 24 or one-fifth of 100?

	I dia	id page 11	I decided to skip this page edHelper
Name:			•

The skirmish was over. Eight people were killed and thirty-seven were injured. There were three hundred forty-seven people involved in the skirmish. What percent of the total people involved, to the nearest whole percent, were either killed or injured?

The number of coyotes in the area around Big Town has changed over the years. During the previous survey, which was done two years ago, there were estimated to be 554 coyotes. The most recent survey indicates the coyote population has increased by 4%. If this is true, what is a good estimate for the number of coyotes presently around Big Town?

After a big storm, Mr. Bloop noticed that a lot of the sand from his volleyball pit had been blown away. He drove his pickup truck down to the local garden supply yard and purchased 9 truckloads of sand to add to the pit. His truck could carry 1,000 pounds of sand each time. The sand cost \$115 per ton. Originally, it took 12 pickup truck loads to fill the pit. What fraction of the sand had been blown away by the storm?

If you have five 3 in by 3 in x 3 in aluminum cubes and superglue them together in a row, what is the surface area of the resulting shape made by the five cubes?

Molecule X is formed at a rate of 13.3 billion molecules per second. Chemical Y is formed at a rate of 8.84 billion molecules per second in the same flask. How many more molecules of type X would be formed after 2.6 seconds?

Rosa is a good scorer for her soccer team. She scored 8 goals during regular play, and she scored 2 on penalty kicks. What percent of her goals did not result from penalty kicks? Round your answer to the nearest tenth of a percent.

Six years ago, Stephanie was one-third as old as she will be in twenty years. How old is Stephanie?

Thomas is seventeen more than one-fifteenth as old as Zachary. Michael is twenty-three less than three times the age of Thomas. In seven years, Michael will be eleven less than two times the age of Thomas. How old is Michael?

William wants to mix 9 liters of 8% milk with skim-milk (0% fat) to produce a mixture of 4% milk. How much skim-milk should William add?

Two jets leave an airport at the same time in opposite directions. The first jet is traveling at three hundred eleven mph and the other at three hundred twenty-one mph. How long will it take for the jets to be 2,002 miles apart?

Kaitlyn wants to make a salad using mushrooms and lettuce. The salad needs to have 30% mushrooms. She has seventeen ounces of mushrooms and fourteen ounces of lettuce. How many ounces of the mushrooms should be used if she wants to use all of the lettuce?

What number must be subtracted from both the numerator and denominator of $\frac{25}{29}$ to make a fraction equal to $\frac{2}{3}$?

If the deductions from Amber's gross pay were decreased from 35% to 26%, she would receive \$2,790 more after deductions. What is Amber's gross pay? Last year, Austin's speed in a bike race was 4 kph. He finished in 12 hours and 30 minutes. What must be Austin's average speed if he is to finish in 4 hours and 33 minutes this year? The product of two consecutive odd integers is one less than three times their sum. What are the two integers?

Kyle and Sarah each invested money in a one-year CD at EdHelper Bank. The bank pays 5.09% yearly interest, compounded annually. Sarah invested four hundred dollars less than two times the amount that Kyle invested. EdHelper Bank will pay Kyle and Sarah a total of \$254.50 in interest for the year. How much money did Kyle initially invest?

Destiny received her exam back and saw that she got 80% of the questions right. If she had answered seventeen more questions correctly, she would have received a grade of 90%. How many questions did Destiny answer correctly?

William has pennies, dimes, and quarters. He has a total of \$18.66. He has nine fewer pennies than dimes and four times as many quarters as pennies. How many of each coin does he have?

	I did page 14	I decided to skip this page
Name:		currenper
Robot was given a math problem to solve.		
The attendance at the International Language Clast three years has been 4,109, 3,831, and 4,125. attendance for those years rounded to the near	What was the t	
Robot wrote this program in Python to solve it.		
year1_attendance = 4109 year2_attendance = 3831 year3_attendance = 4125		
total_attendance = year1_attendance + year2_at	tendance + year	3_attendance
rounded_total_attendance = round(total_attenda	ınce, -2)	
print(rounded_total_attendance)		
Robot's program will print the answer to the math problem. What will the program print out? Fill in the blanks.	m.	



Hint

The round(number) function in Python is used to round a number to the nearest integer.

print(round(16.1)) would print 16 print(round(9702, -2)) with the ",-2" option will round to the nearest hundred and print 9700

		I did page 15	I decided to skip this page edHelper
Name:			edherper
Robot was give	en a math problem to solve.		
painting in procrasting	28 students in the Art Club. They all p the Mills River Art Contest. Of that nu ated and didn't have a picture comple ave pictures to enter?	ımber, 20%	y
Robot wrote th	his program in Python to solve it.		
total_st	tudents = 28		
procra	stinated_students = total_students * 0.20		
student	ts_with_pictures = total_students - procrast	tinated_students	
print(in	nt(students_with_pictures))		
Robat's progra	am will print the answer to the math probler	m	
. •	program print out? Fill in the blanks.		
'	3		
	Hints and a Question The introduction in Duther is used.	d to round a num	bar DOWN to the
	The int(number) function in Python is used nearest integer.	a io rouna a num	ber DOWN to the
	print(round(43.6)) would print 43		
- 9 <u>-9-</u>	To multiply in Python * is used.		
	After Robot's program is done, the variable What value does it have?	ble total_students	will have a value in it.

I did page 16 I decided to skip this po edHelper
At the mud factory, Purple's job is to scoop up mud and make it into kilogram blocks of
mud. She loves her job! Today there were 7,228 milligrams of mud trucked in. Each mud
block is precisely 1 kilogram, no less, no more. How many mud blocks can she make today?
Fill in the missing numbers. 21 - (-9) =
22 - () = 29
+ (-8) = 12
-17 - (-6) =
(-4) = -11
+ (-3) = -21

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	ednerper	

Use >, <, or = to complete.

$$(-12.7)$$
 - (2.3) - (2.1) =

$$(7.8)(-11.2) =$$

$$(-5.4)(-6.5) =$$

$$(-8)(-12) =$$

Use >, <, or = to complete.

Write the reciprocal of each number.

Simplify.

Simplify.

Use >, <, or = to complete.

Simplify.

Use >, <, or = to complete.

edHelper.com/math_workbooks.htm

Math Workbook

$$-(27) - (-10) =$$

$$(-8)(-8) =$$

$$(-10)(12) =$$

$$(-7)(-8) =$$

$$(-8.5)(-5.5) =$$

$$(-8)(5) =$$

Use >, <, or = to complete.

Write these numbers in order from least to greatest:

11,
$$\frac{3}{7}$$
, $\frac{-2}{7}$, -3, 0

$$(-7.9)$$
 - (3.8) - (1.5) =

Write the reciprocal of each number.

Use >, <, or = to complete.

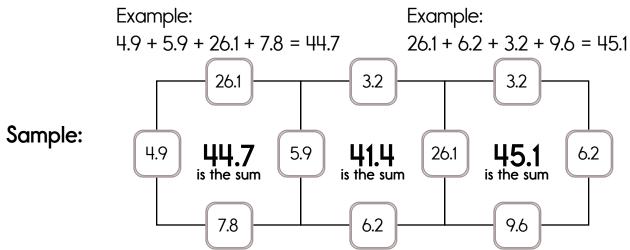
$$(9.6)(-11.8) =$$

Name:	I	did page 19 I decided to skip this page edHelper
Five times a number is $27 \cdot \frac{1}{2}$. What is the number?	Thirty-six more than two-thirds of a number equals 64. What is the number?	Twelve exceeds one-twelfth of a number by 7. What is the number?
Ten more than 11 times a number is 109. What is the number?	Three-fourths of a number equals 1,575. What is the number?	A number minus 12 is forty-seven. What is the number?

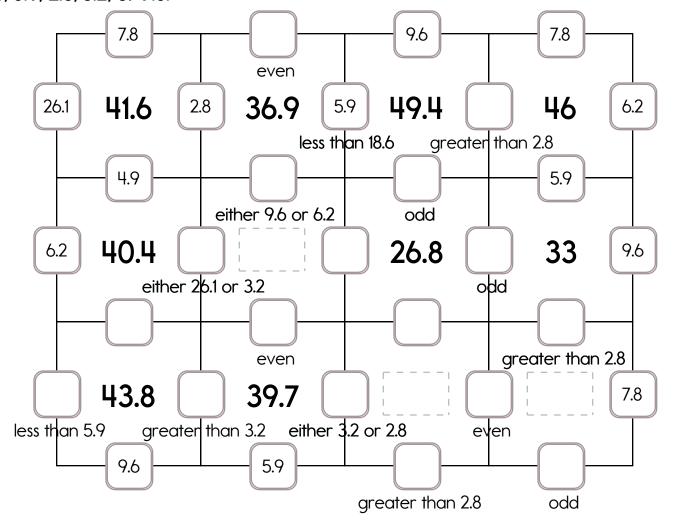
		I did page 20 I decided to skip this page
Name:		edHelper —
If a number is increased by 81, the result is 121. What is the number?	Fifty-six more than a number is one hundred thirty-five. What is the number?	Two-thirds of a number equals 8. What is the number?
Twenty-six exceeds one-eleventh of a number by 15. What is the number?	If six is added nineteen times to a number, the result is 144. What is the number?	The sum of forty-five and twenty is ten more than a number. What is the number?

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This puzzle has a large number in the middle, which is the sum of the four numbers that surround it.

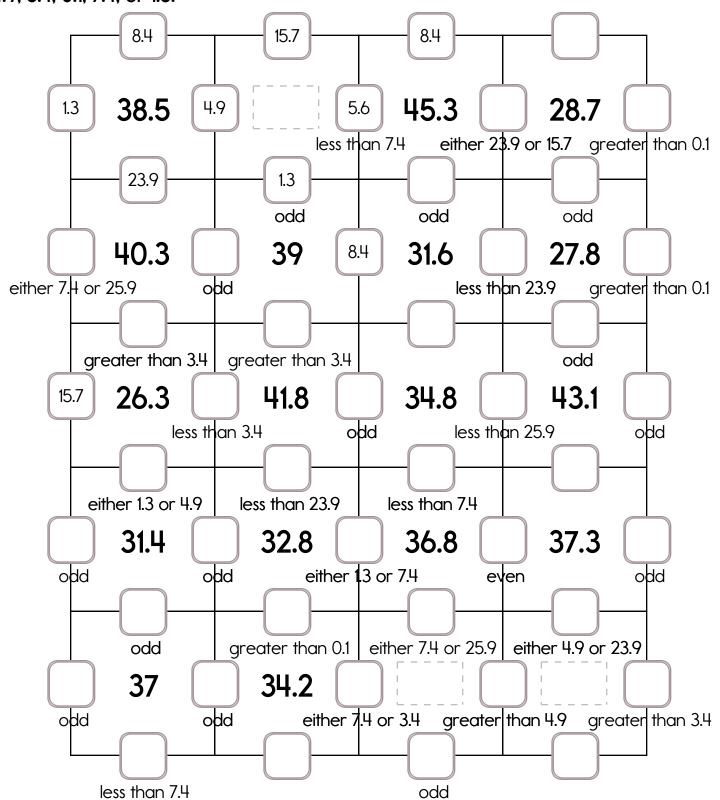


Fill in the missing numbers. How? The sum of the four surrounding numbers is in the center of each square. Exactly one of the four numbers has to be one of these numbers: 18.6, 11.3, or 26.1. The other three numbers have to all be DIFFERENT and must be from these: 3.2, 4.9, 9.6, 5.9, 2.8, 6.2, or 7.8.



	I did page 22	I decided to skip this page edHelper
Name:		

Fill in the missing numbers. How? The sum of the four surrounding numbers is in the center of each square. Exactly one of the four numbers has to be one of these numbers: 15.7, 23.9, or 25.9. The other three numbers have to all be DIFFERENT and must be from these: 8.4, 5.6, 4.9, 3.4, 0.1, 7.4, or 1.3.



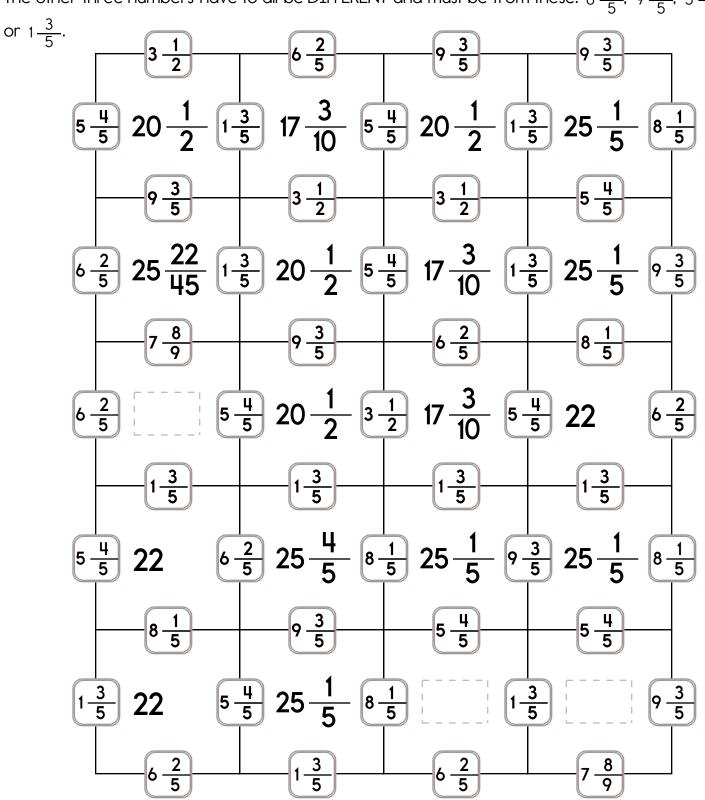
Name:	I did page 23 I decided to skip this pared Helper
The difference between two numbers is 580. The average of these same two numbers is 613. What are the two numbers?	Erin is working on her computer. She is choosing pictures for a digital album and is clicking her mouse every 2.2 seconds. How many times will she click in one minute if she can keep that up?
At the mall, Amy bought a shirt that cost \$18.89 before tax. After adding sales tax, she had to pay \$20.79. What is the sales tax rate as a percent?	Pam has 80 US dollars, but she wants to exchange her money for Euros. The bank has a sign that says 1 Euro = 1.22 US dollars. If she exchanges her US dollars into Euros, how many Euros will she get?

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	edHelner	

Fill in the missing numbers. How? The sum of the four surrounding numbers is in the center of each square.

Exactly one of the four numbers has to be one of these numbers: $8\frac{1}{5}$, $7\frac{8}{9}$, or $3\frac{1}{2}$.

The other three numbers have to all be DIFFERENT and must be from these: $6\frac{2}{5}$, $9\frac{3}{5}$, $5\frac{4}{5}$,



Name:		did page 25 I decided to skip this page dHelper
Find 75% of 116.	Find 39% of 222.	Find 6% of 50.
Change $\frac{18}{25}$ to a decimal.	Change 0.57 to a percent.	Find 60% of 110.
Change 2% to a decimal.	Change 0.49 to a percent.	Find 5% of 70.
Change 24% to a decimal and a fraction expressed in its lowest terms.	192 is what percent of 240?	Change to percents. $ \frac{37}{100} = \frac{6}{10} = \frac{40}{100} = \frac{90}{100} = \frac{59}{100} = \frac{5}{10} = \frac{5}{10} = \frac{5}{10} $

	I did page 26 I decided to skip this pa edHelper
Name:	
Paul has some nickels, 3 quarters, 6 dimes,	(-10)(-7)(11)?
and 4 pennies. If Paul has \$6.59 all together,	A) -40
how many nickels does Paul have?	B) 505
A) 4	
B) 9	C) 39
C) 10	D) 770
D) 7	
_, .	
34 x 603 =	What is the best estimate for 425.66 x
A) 20,902	55.613?
B) 20,501	A) 2400000
C) 20,502	B) 15000
D) 20,532	C) 35000
D) 20,332	D) 24000
	2, 2.333
. 40	
How many cups in 10 quarts?	Which of these is the greatest?
A) 40 cups	A) twenty-five tenths
B) 320 cups	B) three hundred eighty-four thousandths
C) 8 cups	C) ninety-three hundredths
D) 20 cups	D) one and eight tenths
' '	

Get a fidget spinner! Spin it.

Gei	u	nagei	spii ii iei :	Spiriii
	_			

$$t - 7 + t = 39$$

What is the value of t?

What is the value of t?

What is the prime factorization of 15?

Emma told the class that they should drink about 1.87 liters of water per day. There are 21 kids in the class, including Emma. They will all try to do that. How much water will the class drink in a day?

A circle graph has four sections. Only three sections are labeled. The labels are 16.32%, 29.15%, and 22.53%. What should the missing section be?

I needed to spin _____ time(s) to finish.

Simplify.

$$\frac{10,200}{13,600} =$$

 $3.8106 \times 10^2 =$

Rewrite $\frac{9}{25}$ as a decimal.

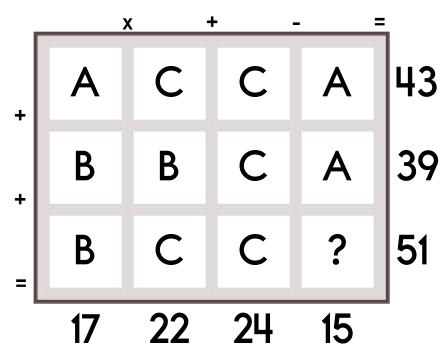
$$9 \times 9 \times 9 \times 9 = x^{4}$$

What is the value of x?

$$4 \times (64 \div 8) - 49 \div 7 =$$

	Пі	did page 28 I decided to skip this page
Name:		edHelper
Christian has three times as many dimes as quarters and four times as many nickels as quarters. Christian has a total of eighty-eight nickels, dimes, and quarters. The total value of the coins is \$8.25. How many of each coin does he have?	David took a certain number of dimes from Emma. He then gave Emma the same number of quarters in return. David had \$1.80 more than he had before the exchange. What was the number of quarters that David gave Emma?	Joseph has \$2.70 in nickels and pennies. Joseph has six more pennies than nickels. How many of each coin does he have?
Kayla has fourteen more pennies than quarters. Kayla has a total of sixty-eight pennies and quarters. How much money does she have?	Alexis' dimes and quarters total \$22.15. If the dimes were replaced by pennies then she would have \$19.54. How many of each coin does she have?	Rebecca has a total of three hundred twelve coins. She has four times as many dimes as quarters and one-third as many quarters as pennies. How much money does she have?

Name: _



Equations and Hints:

Each letter is a whole number.

Fill in the equations using the chart:

$$B \times B + C - A = 39$$
 $A \times _{--} + C - A = 43$

$$A \times _{--} + C - A = 43$$

Additional hints:

$$A > 3$$
 $B = A + 1$

Solve:

A circular clock made by the Bigtown Time Works has a diameter of 11 inches. What is the clock's radius? Peter drew a number line from 0 to 120 by fifteens. How many natural numbers were listed on the number line? Write an equation to represent this situation, and then solve it: David paid his mom back \$27 of the total that he owed her, but he still owed her \$96. How much did his mom loan him?

Alex made copies of 5 of Ms. Bradstreet's poems. He wanted to put them up on the wall in a row. If their order was not important, how many different combinations of poems are possible?

Kevin's gecko grew $2\frac{1}{2}$ inches last year. Jason's gecko grew $\frac{2}{5}$ as much. How many inches did Jason's gecko grow last year?

A women's hockey team outshoots their opponent 45 shots to 22. What is the ratio of each team's shots to the total shots in the game?

		I did page 31 I decided to skip this page edHelper
Name:		— ednerper
One-eleventh of a number, decreased by 6 is 8. What is the number?	Forty-nine less than a number is negative one hundred twelve. What is the number?	Five-sixths of a number equals 100. What is the number?
A number multiplied by 12 is -50.4. What is the number?	100,000 and 10,000,000 added to a number is 10,936,001. What is the number?	Thirteen exceeds one-third of a number by 5. What is the number?

		I did page 32 I decided to skip this page edHelper
Name:		eurierpei
10,000 and 9,000,000 added to two-thirds of a number equals 9,033,332. What is the number?	A number minus 3.32 is 36.02. What is the number?	The sum of a number and 4/5 is 1 3/10. What is the number?
The difference between 447 and half of a number is 370. What is the number?	Two-thirds of a number equals 452. What is the number?	The sum of a number and 9 2/3 is 10 5/6. What is the number?





