

63	-17		$-1\frac{1}{2}$		+25		$+\frac{3}{12}$		$-\frac{1}{2}$	
----	-----	--	-----------------	--	-----	--	-----------------	--	----------------	--

Name: _____

Pick 26 to do:

Skip 2 pages.

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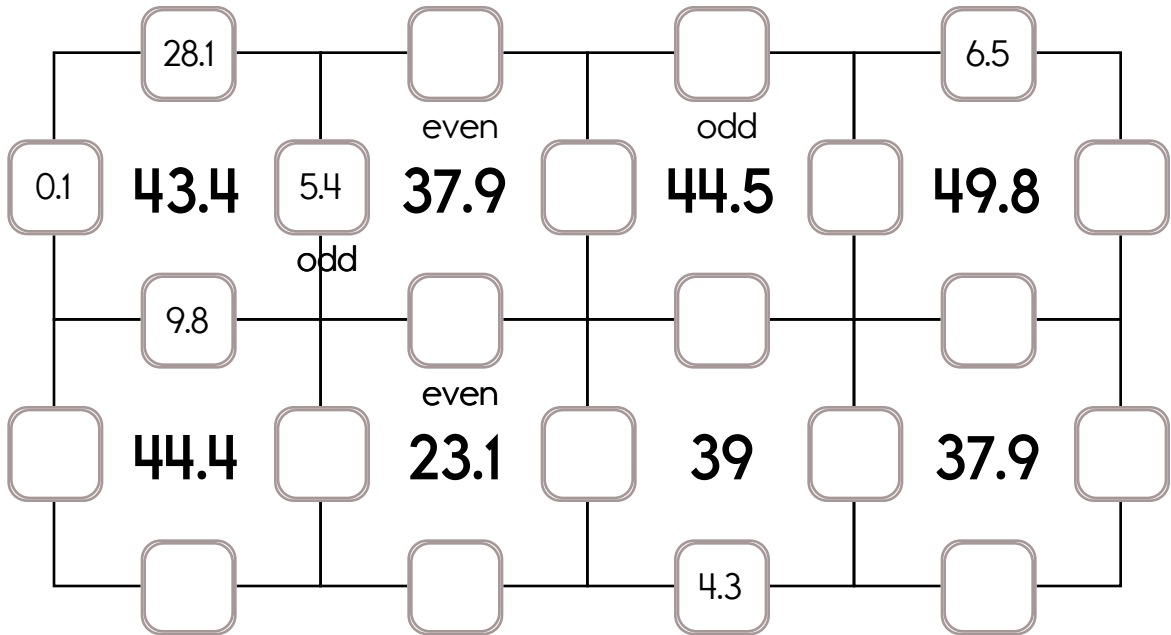
Challenge Math Book 24



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: 28.1, 12.2, or 22.7.

The other three numbers have to all be DIFFERENT and must be from these: 4.3, 9.8, 5.4, 6.5, 1.8, or 0.1.



$57\frac{11}{12}$
$+\frac{1}{12}$
$-4\frac{1}{2}$
$-\frac{1}{2}$
+51
-2
$+\frac{1}{2}$

+6
$-8\frac{4}{12}$
$+\frac{7}{12}$
-47
$-\frac{1}{2}$
+9
29
+22

	$+\frac{9}{12}$		-16		$+\frac{7}{12}$		-45		+15	
--	-----------------	--	-----	--	-----------------	--	-----	--	-----	--

Name: _____

Robert loves art. He doesn't like to draw or paint. He likes to tape stuff together, and he LOVES to use scissors.

"I am what's known as an artissor. It's a fine distinction that is much preferred over mere artists," Robert says to try to annoy Holly.

"That's not a thing! I'm telling," cries Holly.

Miss Keknew couldn't help herself. "Yes, that's not really a real thing."

"It is!" Robert said, as he cut and made 18 squares of paper. Each piece was so tiny. It had only 1 cm on each side.

"I will now make a rectangle by arranging these pieces of paper together, without overlapping. But not just any rectangle; this will be the biggest possible rectangle by perimeter that is possible using these 18 pieces of paper."

If Robert does what he says, what is the perimeter of the rectangle he makes?

By the way, if you showed a picture of it, that would be cool, too!

Name: _____

Write the reciprocal.
13

Reduce $\frac{78}{96}$ to its lowest terms.

$$10 - \frac{1}{2} - \frac{1}{10} =$$

$$\begin{array}{r} \frac{7}{8} \\ - \frac{6}{10} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{5}{6} \\ \frac{5}{6} \\ + \frac{5}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 4 \frac{2}{12} \\ - 2 \frac{11}{12} \\ \hline \end{array}$$

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

$$42 - \frac{4}{9} =$$

Write the reciprocal.

$$\frac{14}{22}$$

Reduce $\frac{8}{20}$ to its lowest terms.

$$11 + \frac{1}{6} + \frac{8}{9} =$$

$$12 - \frac{1}{2} + \frac{1}{3} =$$

Write the reciprocal.

$$\frac{1}{8}$$

Reduce $\frac{32}{72}$ to its lowest terms.

Write the reciprocal.

$$\frac{16}{19}$$

Name: _____

	+		-	=	
+	A	A	B		4
+	?	B	B		18
+	A	C	A		7
=					
	40	36	47		

Equations and Hints:

Each letter is a whole number.

Fill in the equations using the chart:

$$A + C - A = 7 \quad B + B + A = \underline{\quad} \quad \underline{\quad} + \underline{\quad} + \underline{\quad} = 36$$

$$\underline{\quad} + \underline{\quad} - \underline{\quad} = 4$$

Additional hints:

$$C < 16 \quad B = A + 7$$

Show Work:

Solve:

$$? = \underline{\quad}$$

Name: _____

**FUN
BREAK!**

Play a game online!

edHelper.com/math-games.htm**I PLAYED
ONE
GAME**☐(Check the
box after
you play.)**MY SCORE**



What kind of angle has
a measure of between
 90° and 180° ?

An angle measures 18° .
What would you call this
angle?

Sketch a right angle named
 \angle

Round 8,608 to the nearest
thousand.

The radius of a circle is 543
cm. What is the diameter
of this circle?

What is the area of a
rectangle with sides 4 cm
and 9 cm?

Name: _____

Name the place value that is 100 times greater than the hundredths place.

Alex is making his favorite ultimate chocolate chip cookies for a huge party at school. He just finished dropping rounded tablespoons of dough on his cookie sheet and was able to fit 18, which will make 18 cookies. The problem is that he needs to make 113 cookies for his party, and his oven can only fit one cookie sheet at a time. How many cookie sheets will he need to bake?

Name: _____

Sudoku Sums of 9

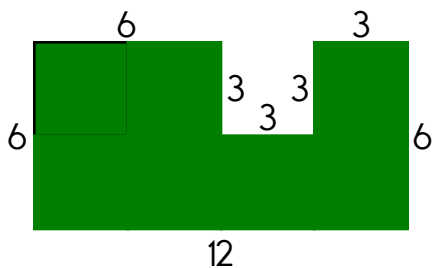
Each row, column, and box must have the numbers 1 through 6.
Hint: Look for sudoku sums. The sum of the two boxes inside of the dashed lines is 9.

Here is an example of a sudoku sum of 9:

4	5
---	---

6					
			6	2	
		3	5		
	5		1	4	
	4		3		
				5	

$$8 \overline{)40}$$



The perimeter is _____.

Write the number with 2 hundreds and 4 thousands.

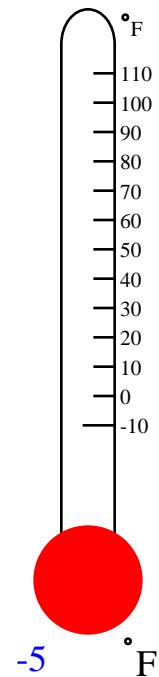
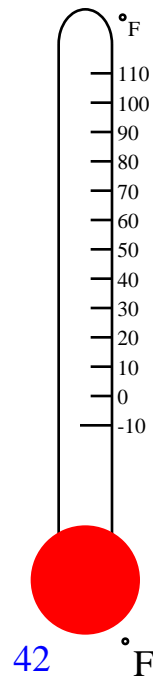
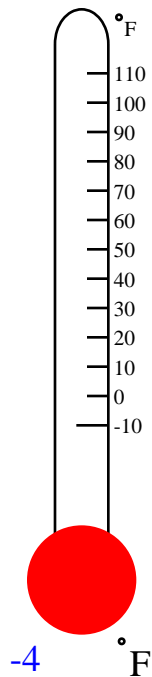
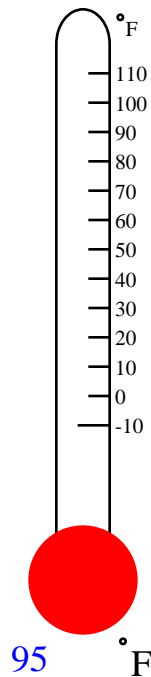
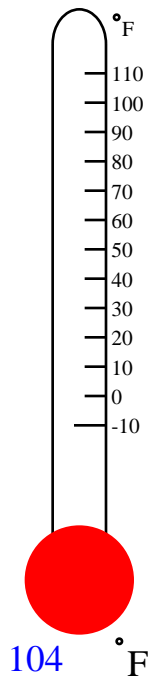
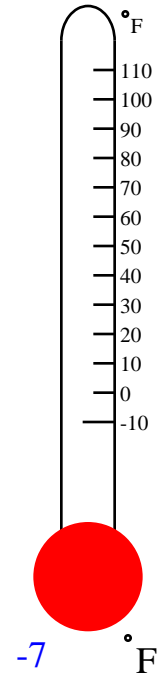
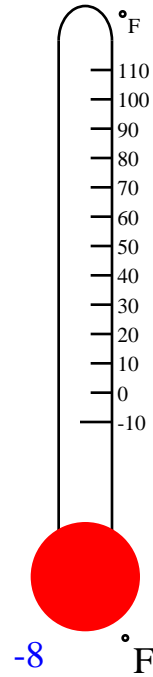
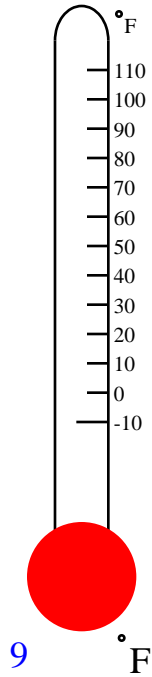
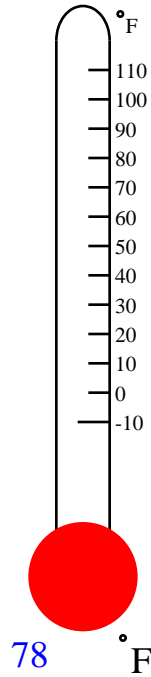
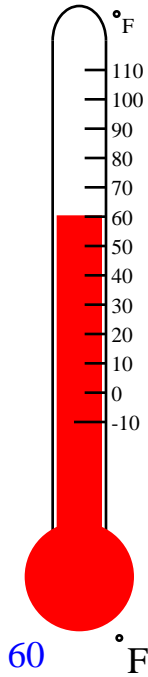
Can you think of a five-letter word that has the vowel U in it?

Which number is greater: 0.4 or 0.49?

$$8 \overline{)56}$$

Name: _____

Color in the thermometer.



Name: _____

**FUN
BREAK!**

Play a game online!

edHelper.com/math-games.htm**I PLAYED
ONE
GAME**☐(Check the
box after
you play.)**MY SCORE**



Round 64,684 to the
nearest hundred.

Yummy Donuts gave two
dozen chocolate donuts
and five dozen jelly donuts
to the school. How many
donuts did they give?

A rectangle is 48 cm on
one side and 9 cm on
another side. What is the
perimeter?

How much time is it from
6:00 a.m. to 11:20 a.m.?

$$8 + 5 - 6 + 2$$

$$7\frac{3}{8} + 5\frac{1}{8}$$

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.

7+		1-	3-	9+
3	4			5
7+	2-		3-	
4		10+	1-	2
3-				3

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

$$\underline{\quad} - 1 = 1$$

$$5 - \underline{\quad} = 2$$

$$\underline{\quad} - 2 = 1$$

$$\underline{\quad} + 4 + \underline{\quad} = 7$$

$$\underline{\quad} - 2 = 3$$

$$\underline{\quad} - 2 = 3$$

$$\underline{\quad} + 3 + \underline{\quad} = 7$$

$$\underline{\quad} + \underline{\quad} + 4 = 10$$

Name: _____

Amanda and Jenna are weighing their rock and fancy stone collections. Whose collection weighs the most?

Amanda has six red stones that each weigh eleven ounces, four blue stones that each weigh nine ounces, and some bigger rocks that altogether weigh exactly twelve pounds.

Jenna has five red stones that each weigh eight ounces, three blue stones that each weigh seven ounces, and some bigger rocks that altogether weigh exactly thirteen pounds.

1 pound = _____ ounces

Hunter got 2 personal pizzas. He cut his pizza into 6 equal slices and then ate 3 slices. He gave the other pizza to Megan. She cut her pizza into 7 equal slices and then ate 4 slices. Draw a picture of each pizza.

Who ate the most pizza?

Ava cannot decide which of the following two clubs to join, so she wants to pick the club with the most girls. Which club should she join?

The Earth Club has a total of 30 members. There are 4 more boys than girls.

The Gamer's Club has a total of 35 members. There are 5 more girls than boys.

Emily is doing some mental math. She picked a number from a hat. Then she added 2 to that number. She then multiplied the sum by 5. The result she got was 25. What number did Emily start with?

Rose picked a number from the hat and did the same thing, but her result was 15 more than Emily's result. What number did Rose start with?

Name: _____

$$5 \times 20 = 100$$

$$\frac{4}{5} =$$

100

Skill: Fractions and Decimals

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

10

Skill: Fractions and Decimals

$$\frac{1}{5}, \frac{9}{10}, \frac{2}{5}$$

Rewrite the numbers in order from smallest to largest.

_____, _____, _____

Skill: Fractions

Which of these is nine thousand more than 211,467?

220,467

301,467

212,367

211,557

Skill: Whole Numbers

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

10.5

0.005

100.5

0.05

Skill: Fractions and Mixed Numbers (addition/subtraction)

Compare the numbers. Write >, <, or =.

$$\frac{9}{5} \quad \underline{\hspace{1cm}} \quad \frac{5}{9}$$

$$\frac{15}{18} \quad \underline{\hspace{1cm}} \quad \frac{5}{6}$$

$$\frac{1}{2} \quad \underline{\hspace{1cm}} \quad \frac{1}{4}$$

Skill: Fractions

Name: _____

Only use a pencil to write the numbers on the blank lines. You do not need any scrap paper! Solve it in your head. If you forget a number, then start over. Cool, huh?

Mental Math



= Do it
in your
head!

imagine 7 in your head

add 6

add 8

Write the ones digit.

A

imagine 5 in your head

add 7

double it

subtract 9

subtract 8

Write the number.

B

imagine 7 in your head

double it

subtract 6

add 5

add 2

subtract 7

Write the number.

C

imagine 8 in your head

add 1

multiply 11

add 9

double it

Write the ones digit.

D

What is the sum?

$A + B + C + D$

Wow! Great job! That's the answer, but do you know how to SPELL the number?

_____ n _____ y - t _____

6 after 15 _____

2 before 17 _____

3 before 18 _____

2 after 14 _____

4 before 16 _____

8 before 13 _____

7 after 13 _____

5 before 19 _____

1 before 11 _____

Name: _____

Mrs. McCormack was gathering all the supplies for her class's Valentine's Day party. The 23 kids in her class were so excited to celebrate by handing out cards and making crafts. The students had signed up to bring most of the goodies for the party, but Mrs. McCormack needed to purchase plates, napkins, and drinks. She counted the juice boxes, water bottles, and milk cartons. She decided to buy 3 six-packs of each beverage. If each student is going to have an equal number of drinks, how many drinks can they each have?

Show your work.

Name: _____



Write your own math problem here.

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

Name: _____

Jason made a card for the librarian at his school. She was always so helpful, but a lot of people didn't like her because she made them be quiet in the library. He put the card in a book and left it on her desk. He hoped she would have a good day. It was his way of celebrating Random Acts of Kindness Day. The card was four inches wide and three inches tall. What was the perimeter of the card?

Justin played a joke on his father. On Mirth Day Justin planted 14 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?

Robert worked very hard to organize his card collection. When he finally got too tired to work on it, he had organized $\frac{24}{50}$ of the collection. Write the fraction in simplest form.

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

Erin told her father that she needed 90 inches of rope to make a double jump rope. He said that he needed to know how many feet of rope she wanted. Change 90 inches to feet.

Name: _____

$$12 + \frac{2}{3} - \frac{1}{8} =$$

Reduce $\frac{54}{96}$ to its lowest terms.

Write the reciprocal.

$$\frac{6}{24}$$

$$2\frac{3}{7} \div 3\frac{8}{12} =$$

Find the least common denominator.

$$\frac{8}{9} \text{ and } \frac{4}{10}$$

$$\frac{2}{5} \times \frac{1}{7} =$$

$$\begin{array}{r} 3\frac{2}{9} \\ 4\frac{8}{9} \\ + 9\frac{2}{9} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{10}{12} \\ + \frac{1}{12} \\ \hline \end{array}$$

$$\begin{array}{r} 19\frac{8}{9} \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} \frac{5}{11} \\ - \frac{1}{3} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{1}{3} \\ - \frac{1}{6} \\ \hline \end{array}$$

Change $\frac{216}{28}$ to a mixed number.

Name: _____

Robot AQD said, "I have YYYYYYYY robot cats."

Robot EFG said, "I have Y robot cats."

Robot cat said, "Each Y stands for five cats. We have lots of cats!"

How many cats does Robot AQD have? How many cats does Robot EFG have?

Unscramble these letters to spell a two-digit number with two different digits.

v-yheigeitf _____ (85)

einny-tixs _____

Name: _____

Fill in the missing numbers.

Only rule - The same number CAN NOT be next to each other, in ANY direction.

Dark lines surround a block. Numbers to use in a block:

A block with 1 space has to be the number 1.

A block with 2 spaces must have the numbers 1 and 2.

A block with 3 spaces must have the numbers 1, 2, and 3.

A block with 4 spaces must have the numbers 1, 2, 3, and 4.

4	2	4	
3	1	3	
2	4	2	
1	3	1	

An entire block with 4 spaces is blank. Since the block is 4 spaces it uses the numbers 1-4.

4 1 3 2

4	2		
3	1		
4	2	4	1
3	1	3	2

An entire block with 4 spaces is blank. Since the block is 4 spaces it uses the numbers 1-4.

2 3 4 1

	4	1	3	2
2	3		4	
1	4	1		2

Hint - These numbers are missing:

1 1 3 2

1	3			1
2		1	3	2
	3	2	4	1

Hint - These numbers are missing:

4 1 4 2

3 is more than

☐ 2 ☐ 3 ☐ 4

9 tens and 7 ones

☐ 97 ☐ 79 ☐ 9

fifteen

☐ 15 ☐ 5 ☐ 3

Name: _____

Fill in the missing numbers.

		1	4
1	4		3
2	3	1	
		2	3

Hint - These numbers are missing:

4 2 4 1 2 3

4	2	4	2
2		2	4
1	3		3

Hint - These numbers are missing:

1 4 1 1 3 3

		2	1
2		4	
4		2	1

Hint - These numbers are missing:

3 3 1 4 3

1	2	4	
	3	1	2
1			

Hint - These numbers are missing:

2 3 4 3 4

5, 7, _____, 11, 13, 15

Circle all the ways to make 16.

12 + 4 5 + 9 15 + 1
6 + 12 11 + 5 10 + 6

80, 96, _____, 128, 144,
160, 176

$7 + 9 = \square$

$8 + 3 = \square$

$9 + 7 = \square$

$8 + 2 = \square$

$5 + 4 = \square$

$9 + 3 = \square$

Name: _____

Puzzle:

		3		17
			3	24
			3	21
	3		3	20
20	26	27	9	+

Work Area:

		3		17
			3	24
			3	21
	3		3	20
20	26	27	9	+

The sum for each column
and row is given.

= _____

= _____

= _____

= _____

Puzzle:

				20
				8
				16
				16
16	12	8	24	+

Work Area:

				20
				8
				16
				16
16	12	8	24	+

The sum for each column
and row is given.

= _____

= _____

= _____

= _____

= _____

= _____

Name: _____

Ready to make equations? There is a missing equation in each box.
Circle the numbers once you find it!

A

7	69	77
75	1	29
28	12	93
80	58	9

Find an
addition fact.

B

85	98	83
16	44	84
59	30	25
63	49	18

Find an
addition fact.

C

88	37	66
69	43	18
91	89	30
39	60	79

Find an
addition fact.

Equations:

Write the equation facts you found.

A	28	+	1	=	29
B		+		=	
C		+		=	

Can 780 be evenly divided by 10? Circle:
780 is evenly divisible by 10
780 is NOT evenly divisible by 10

How many feet are in 8 yards?

_____ feet

Circle the correctly spelled words.

sentury, century
cimple, simple
sidewalk, sidewok

☐

I did page 22

☐I decided to skip this page
edHelper

Name: _____

Get a fidget spinner! Spin it.

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

How many centimeters in
760.4 meters?

$$3 \times (5 + 1)$$

99 divided by 9 equals

It was 8 degrees above
zero in the morning. By
afternoon the temperature
rose 26 degrees. How
warm was it?

How much time is it from
9:00 a.m. to 10:40 a.m.?

Write $\frac{3}{6}$ in lowest terms.

The radius of a circle is 392
cm. What is the diameter
of this circle?

How many minutes is it
from 8:00 a.m. to 11:55 a.m.?

30, _____, 36, 39, 42, 45,
48, 51, 54, 57

(128), (64), (32),
(16), (8), (4),
_____, (1), $\frac{1}{2}$

Draw a number line
with 0, $\frac{1}{2}$, and 1. Show
where $\frac{3}{10}$ would go. Is
 $\frac{3}{10}$ closer to 0, $\frac{1}{2}$, or 1?

6, $5\frac{2}{3}$, $5\frac{1}{3}$, 5, $4\frac{2}{3}$,
 $4\frac{1}{3}$, 4, $3\frac{2}{3}$, $3\frac{1}{3}$, 3,
 $2\frac{2}{3}$, $2\frac{1}{3}$, 2,
_____, $1\frac{1}{3}$, 1, $\frac{2}{3}$

☐

I did page 23

☐I decided to skip this page
edHelper

Name: _____

Spin again.

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

$$34 + n = 47$$

What is the value of n ?

What is 50% of 1,080?

How many meters are there in 73 kilometers?

753274, 475327, 747532,

274753, 327475, 532747,

753274, 475327, 747532,

274753, 327475, _____,

753274, 475327

Yummy Donuts gave three dozen chocolate donuts and five dozen jelly donuts to the school. How many donuts did they give?

It was 6 degrees below zero in the morning. By afternoon the temperature rose 17 degrees. How warm was it?

Estimate quickly the difference.

$$4,180 - 1,890$$

$$3 + 11 \times 11 + 1$$

What 3 coins add up to 40 cents?

$$9 \div \frac{1}{2}$$

Pick the family fact that is missing.

$$16 \times 9 = 144$$

$$9 \times 16 = 144$$

$$144 \div 16 = 9$$

Round 72,519 to the nearest hundred.

Name: _____

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

____, ____, 4, 7, 4, 4, 7, 4, 4, 7, 4, 4

4, ____, 1, ____, ____, 1, 4, 1, 1, 4, 1, 1, 4, 1, 1

8, 5, 5, 8, 5, 5, ____, ____, 5, 8, 5, 5, 8, 5, ____

Complete each pattern. Write what the rule is.

7	14	21
28	35	
49		63

Name: _____

Holly and Anne want to play Move Fast, their favorite board game. All you do is spin twice, take the sum of your two spins, and move. But if you get the same sum two times in a row, you go to the spot on the board labeled Thunderstorm. The spinner has the numbers 3, 5, 7, and 8 on it. How many different sums are possible?

Holly got a sum of 12 on her first move. What is the chance that she will go to Thunderstorm on her second move?

Rose is playing a video game against Maria. The current score is 2,700 to 4,100. Maria is in the lead.

a. If the game is over and one of the players ended up with 4,600 and the other player has 3,200, can you tell who won?

b. If the game is over and one of the players ended up with 5,300 and the other player has 4,400, can you tell who won?

c. If the game is over and one of the players ended up with 5,300 and the other player has 4,400, can you tell who won?

Make up a situation where you might find these numbers in real life.

a. 17

b. 1,847

c. 59

d. 25,902

The students chosen for the class play were posted. All of the students in the play are in Mrs. Johnson's class and were born in months with exactly 30 days. For each student, write whether they are in the play, might be in the play, or are not in the play.

Robert is in Mrs. Johnson's class and was born on July 15.

David is in Mr. Brown's class and was born on March 12.

Ava is in Mrs. Johnson's class and was born on September 2.

Anna is in Mrs. Johnson's class and was born on November 1.

Alex is in Mrs. Johnson's class and was born on April 27.

Name: _____

Pay the bill!

Erin needs money. She wants to get \$60 in cash, so she writes a check payable to cash in this amount. Write this check.

ERIN

1056

DATE _____

PAY TO THE
ORDER OF _____

\$

DOLLARS

MEMO _____

⑆997098877⑆

⑈4233⑈

1056

Pay the bill!

Erin received a bill from Central Water for \$249.87. Write the check as Erin would write it.

ERIN

1057

DATE _____

PAY TO THE
ORDER OF _____

\$

DOLLARS

MEMO _____

⑆997098877⑆

⑈4233⑈

1057

(172,186,884) , _____,

(2,125,764) , (236,196) ,

(26,244) , (2,916) , (324) ,

Know how many inches in a foot? Okay, smarty pants, how many inches in 3 feet?

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

~~(36)~~ The perimeter of a rectangle is 20 cm. The longer side is 7 cm. How long is the shorter side?

$$8 + 10 - 4 + 9$$

Round the decimal 0.345 to the nearest hundredth.

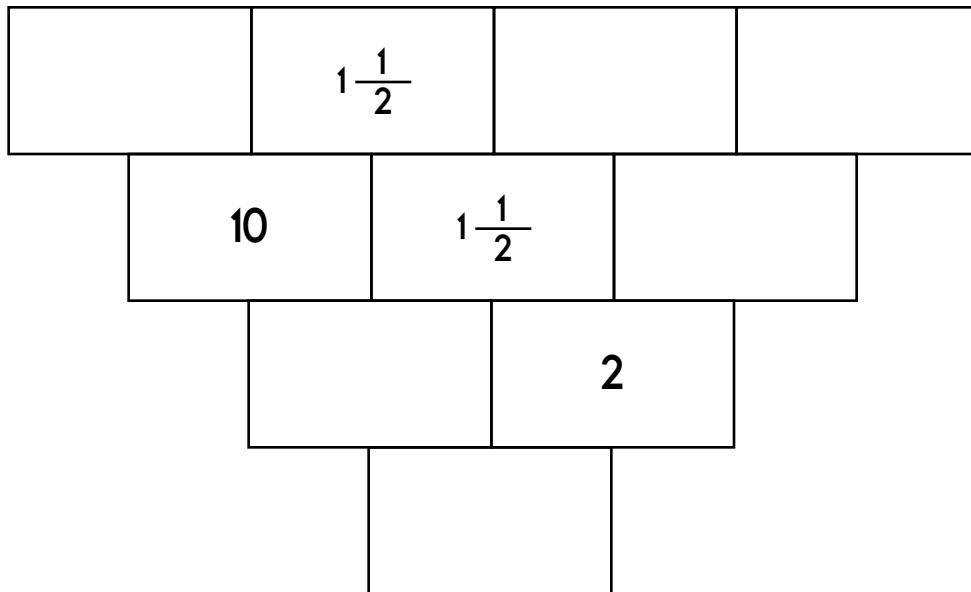
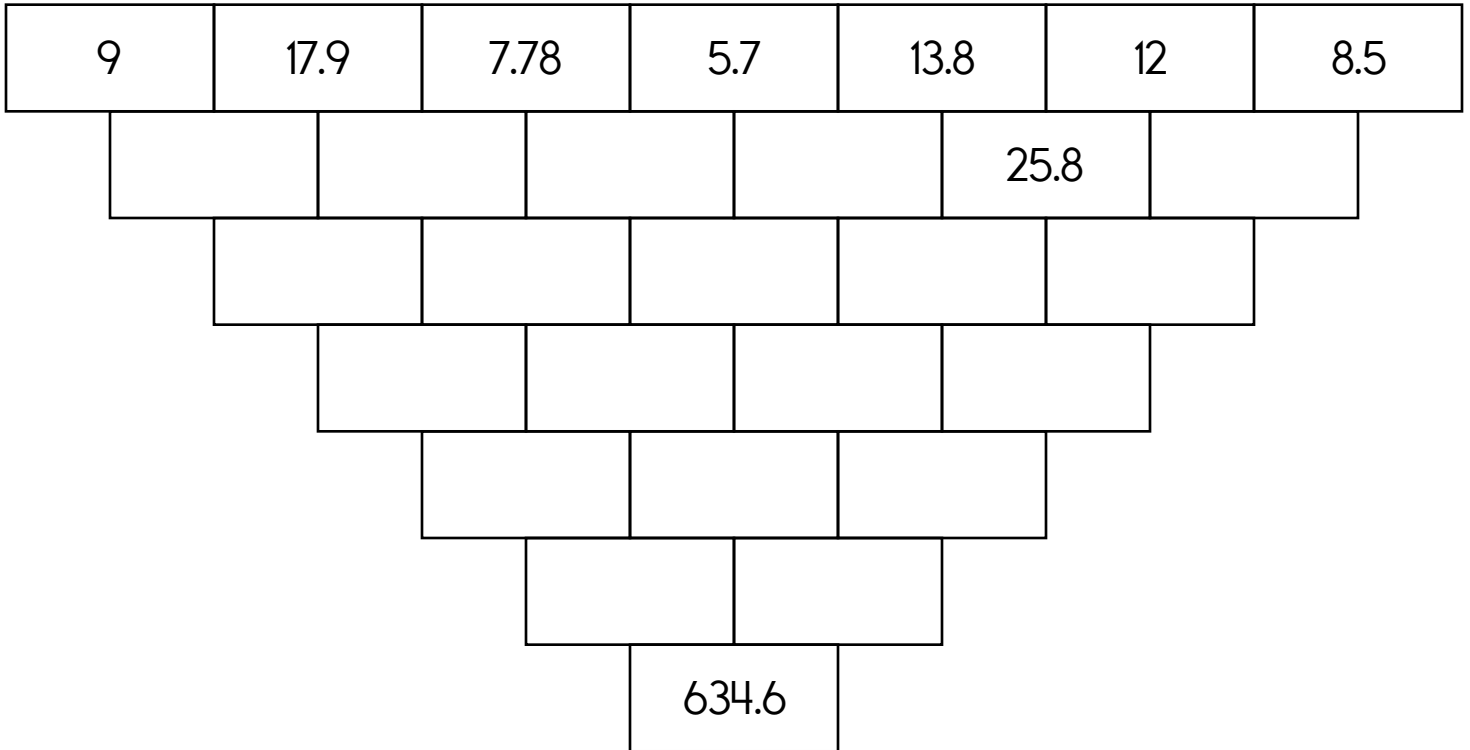
Name: _____

Find the way from START to END by passing through EVERY number that is a multiple of nine exactly ONCE. Cross off each box that is NOT a multiple of nine. Yes, that means you have to go through ALL the multiple of nine boxes. Wow! You are not allowed to go diagonally. Good luck!

START	317	885	97	226	420	982	603	369	36
693	423	504	189	808	524	396	162	961	243
891	522	63	261	702	423	792	870	914	711
387	420	684	90	540	360	464	715	202	171
711	189	774	522	882	792	74	309	733	612
369	45	486	954	648	675	747	824	828	720
774	864	477	855	324	63	495	549	198	791
846	459	936	180	891	567	756	738	171	886
225	9	54	447	924	198	171	123	531	468
117	801	158	210	673	757	778	94	979	END

Name: _____

The block below is the sum of the two blocks above. Fill in the missing blocks.



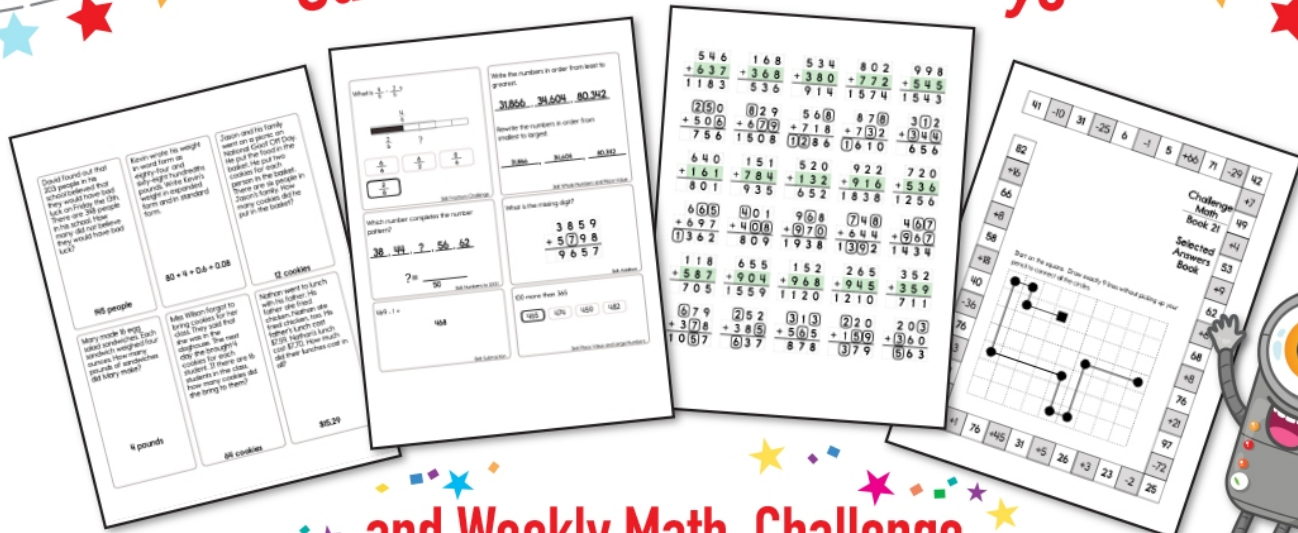
In the number 441,296,502, the digit 6 is in what place?

1 lb = 16 oz

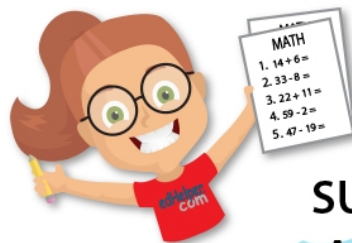
25 lb = _____ oz

$$\begin{array}{r} 781 \\ - 618 \\ \hline \end{array}$$

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