

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

$$\begin{array}{r} 4.483 \\ - 3.171 \\ \hline \end{array}$$

$$\begin{array}{r} 4.8 \\ \times 6.46 \\ \hline \end{array}$$

$$\begin{array}{r} 5.119 \\ + 154.6 \\ \hline \end{array}$$

$$\begin{array}{r} 6.96 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 8.08 \\ \times 0.8 \\ \hline \end{array}$$

$$\begin{array}{r} 3.87 \\ - 2.147 \\ \hline \end{array}$$

$$0.019 \overline{) 0.01919}$$

Rewrite as a vertical equation and solve.  
 $491.199 + 491.199 + 626.54 + 9.6 + 841.6587$

Change  $\frac{3}{5}$  to a decimal.

$$625 \overline{) 1187.5}$$

$$18 \overline{) 0.2556}$$

Write the decimal in words.  
 9.97968

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

double it

subtract 9

Write the number.

\_\_\_\_\_  
A

imagine 3 in your head

add 9

subtract 7

multiply 6

Write the ones digit.

\_\_\_\_\_  
B

imagine 9 in your head

multiply 8

add 5

double it

Add the tens digit to the ones digit.  
Write the sum.

\_\_\_\_\_  
C

imagine 2 in your head

multiply 7

add 6

double it

add 5

Write the odd digit in your answer.

\_\_\_\_\_  
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?

\_\_\_\_\_t\_\_\_\_\_

8 before 12 \_\_\_\_\_

6 after 15 \_\_\_\_\_

3 after 18 \_\_\_\_\_

1 before 14 \_\_\_\_\_

1 after 17 \_\_\_\_\_

4 after 19 \_\_\_\_\_

4 before 18 \_\_\_\_\_

2 after 11 \_\_\_\_\_

5 after 12 \_\_\_\_\_

2 before 15 \_\_\_\_\_

9 after 14 \_\_\_\_\_

8 after 16 \_\_\_\_\_

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

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

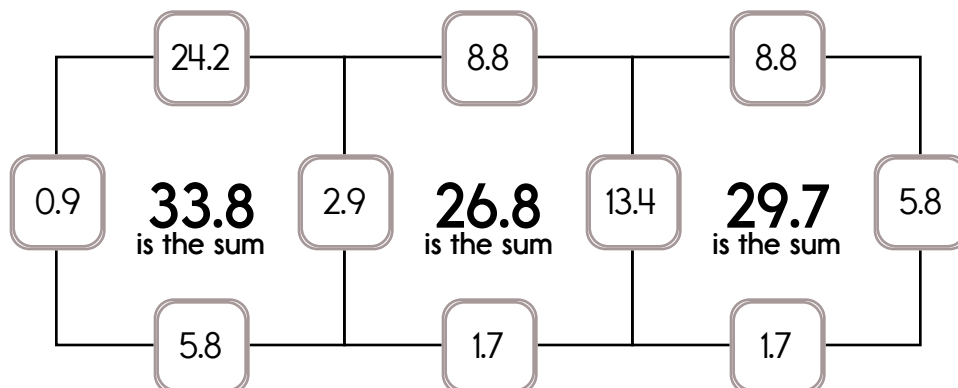
Example:

$$0.9 + 2.9 + 24.2 + 5.8 = 33.8$$

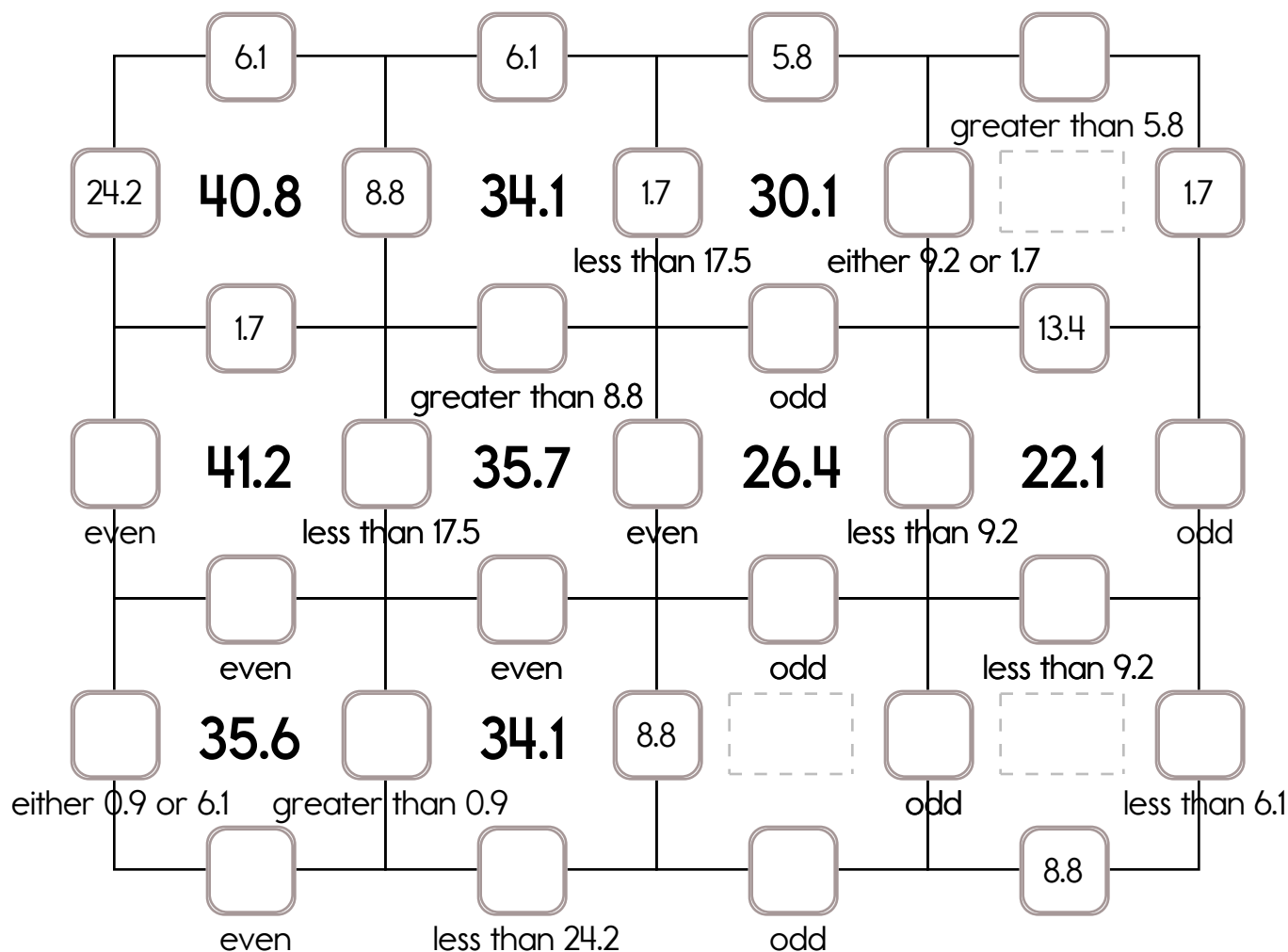
Example:

$$13.4 + 5.8 + 8.8 + 1.7 = 29.7$$

Sample:

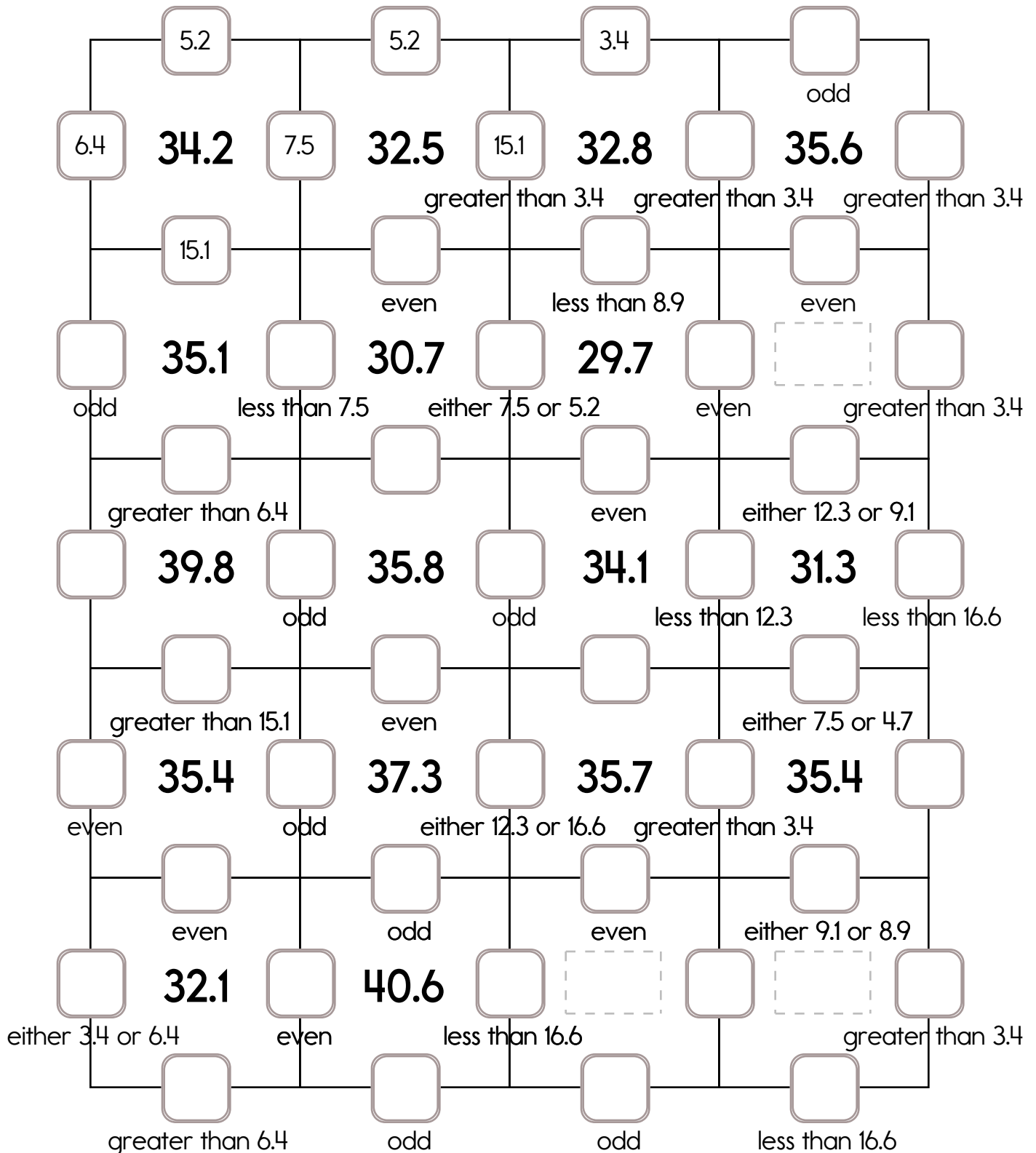


Fill in the missing numbers. How? The sum of the four surrounding numbers is in the center of each square. Exactly one of the four numbers has to be one of these numbers: 17.5, 13.4, or 24.2. The other three numbers have to all be **DIFFERENT** and must be from these: 6.1, 5.8, 0.9, 1.7, 9.2, 2.9, or 8.8.



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: 16.6, 12.3, or 15.1. The other three numbers have to all be DIFFERENT and must be from these: 7.5, 3.4, 6.4, 4.7, 5.2, 9.1, or 8.9.



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

Hannah collected data on earthworm crawl speed. She measured the rate of travel of the same worm 20 times. The range of speeds was 9 cm per minute. If the lowest speed was 1.5 cm per minute, what was the highest speed she measured?

One-third of the class grew peas, one-third grew carrots, and one-third grew beans. The class consisted of 63 students of which five-sevenths were girls. The teacher chose the three groups to be as equal in their boy-girl composition as possible. How many boys and girls were assigned to each team?

Rat snakes produce 7-26 eggs once or twice a year. If 3% of the young survive to maturity, what is the maximum number of surviving offspring a rat snake would be expected to produce in 8 years?

The lava output from the volcano in crater park has quadrupled over the past 30 days. If the lava output 30 days ago was 2 tons of rock per week, what is the output now?

Peter is hiking in the national park. He is on an  $8\frac{1}{4}$ -mile hike and he makes four evenly spaced rest stops along the way. At what mile of the hike does he make his last stop?

Robert's go-kart travels at a maximum speed of 35 kilometers per hour. How far can it go in 28 seconds? Round your answer to the nearest hundredth.

You have the set of numbers  $\{-8, -5, -6, -2, 0, 10, -3, -6, -3, 9, 10\}$ . What is the ratio of negative numbers to positive numbers?

If the ratio of football players to volleyball players at the high school is 7:1 and there are 96 football and volleyball players, how many volleyball players are there?

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

<p>Last year, Anna put off completing 6 of 10 assignments during Procrastination Week. She wants to have the same ratio of not completed to completed assignments this year. If the teacher gives her 15 assignments this year, how many should she complete to keep the ratio the same?</p>	<p>Nathan and his two friends wrote a list of things they love about America. Nathan has twice as many reasons on his list as Jack. Jack has 12 reasons on his list. Jack has 3 times as many reasons on his list as David. How many reasons do they have in all?</p>	<p>Robert spent 15 minutes finding paper and pencils for his art project. He worked on his dragon picture for 1 hour and 16 minutes. It was 4:38 p.m. when he quit drawing. What time was it when he started?</p>
--	---	---

$\begin{array}{r} 690 \\ - 325 \\ \hline \end{array}$	$6 \times 8 =$	<p>Hannah rolls a die. What is the chance of her rolling a 4?</p> <p>_____</p>
---	----------------	--

Which is the better buy? Four bags of candy for \$24 or seven bags of candy for \$14?	1 kg = 1,000 g	7 x 12 = _____
	14 kg = _____ g	
	13 cm = _____ mm	

$48 \div 8 =$	$\begin{array}{r} 446 \\ + 317 \\ \hline \end{array}$	$7 \times 3 =$
---------------	---	----------------

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

$\begin{array}{r} 41 \\ - 25 \\ \hline \end{array}$	Circle the digit in the tenths place. 34.25	$\begin{array}{r} 42 \\ + 37 \\ \hline \end{array}$	$6 \times 11 = \underline{\hspace{2cm}}$
$818 - 445 = \underline{\hspace{2cm}}$		Can 605 be evenly divided by 11? Circle: 605 is evenly divisible by 11 605 is NOT evenly divisible by 11	
$15 \div 3 = \underline{\hspace{2cm}}$			
You cannot decide what pizza store to go to. April's pizza cuts their pizza into 6 slices. Each slice costs \$5 each. Emily's pizza cuts their pizza into 5 slices. Each slice costs \$4 each. If you like each pizza the same, which pizza store has the better buy?		How many inches are in 3 feet?  $\underline{\hspace{2cm}}$ inches	
$54 \div 6 = \underline{\hspace{2cm}}$	Here is a pattern of letters:  M B H B M B H B M B H B M B H ...  What letter will be the 35th term in the pattern?		$88 \div 11 = \underline{\hspace{2cm}}$
$9 \times 8 = \underline{\hspace{2cm}}$			
What number is halfway between 10 and 19?		$2 \times 11 = \underline{\hspace{2cm}}$	$3 \times 11 = \underline{\hspace{2cm}}$

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

What number is halfway between 12 and 18?	Amanda and Sarah are playing a number game. Amanda says 40. Sarah replies that the answer is 5. Amanda says 72. Sarah replies that the answer is 9. Amanda says 8. Sarah replies that the answer is 1. Amanda says 32. Sarah is thinking. What number should Sarah reply with?
$77 \div 11 =$ _____	
$8 \times 5 =$ _____	

Circle the smallest number: 3,618,095,472 806,571,493 1,738 95,064	$7 \times 6 =$ _____
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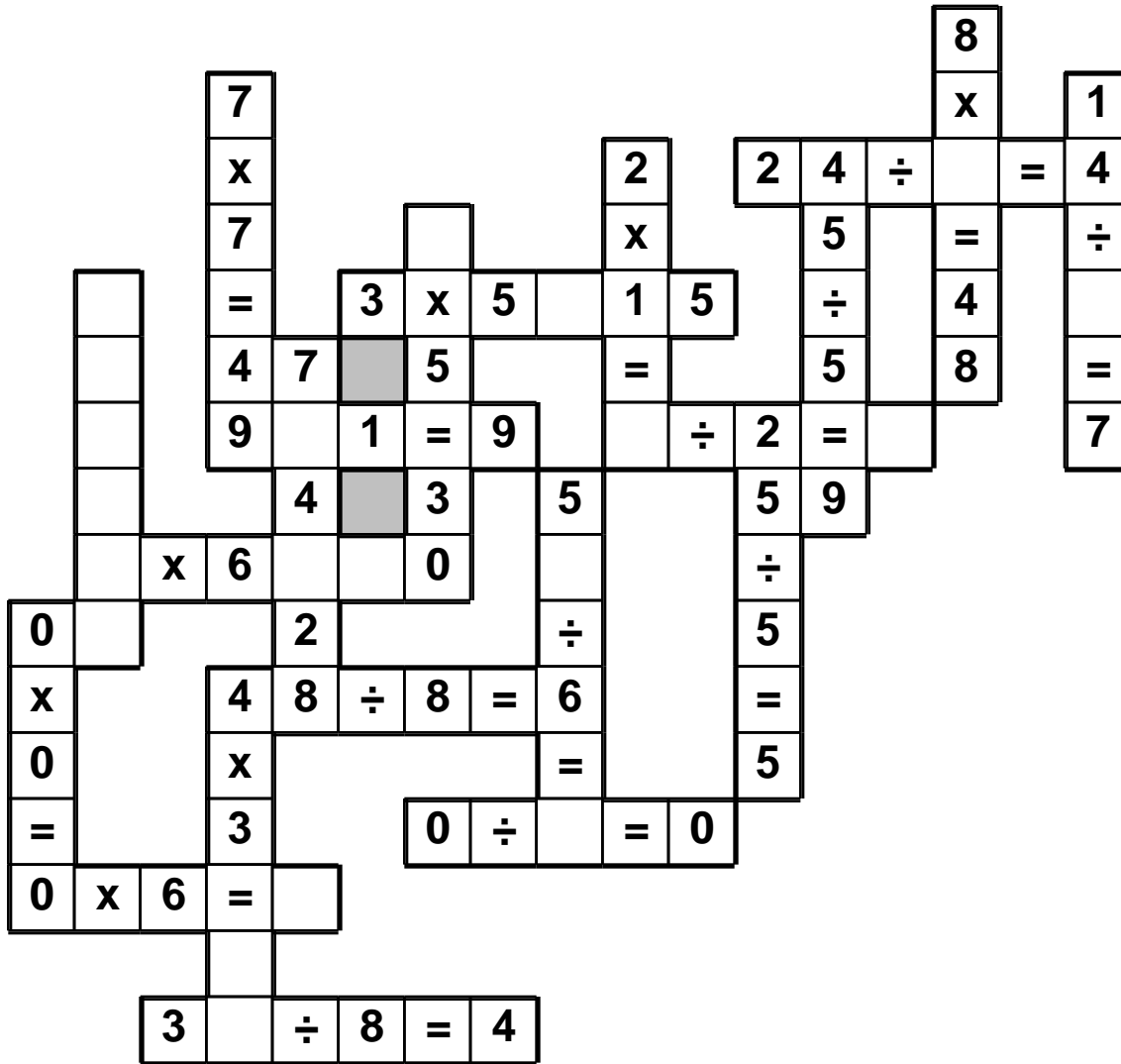
$77 \div 11 =$	What should replace the F in this equation? $50 \div 10 + F = 20$	$88 \div 8 =$ _____
----------------	--	---------------------

What time is 14 hours after 5:00 p.m. _____	$4,127 + 7,837 =$ _____
--	-------------------------

$48 \div 6 =$ _____	$8 \times 10 =$ _____	Write this as a number in standard form. Use a comma in your number. four hundred ninety-seven thousand, one hundred fifty-five _____
---------------------	-----------------------	---



Use the pieces above to help you fill in the runaway math puzzle.



$$3 \times 10 = \underline{\hspace{2cm}}$$

Emily is younger than Sarah. Sarah is younger than Rosa. Who's the oldest?

$$3 \times 3 = \underline{\hspace{2cm}}$$

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

Abigail, Jasmine, Jennifer, and Ethan watched television on Monday and Tuesday. On Monday they started watching at 8:00 p.m. and on Tuesday they started watching at 6:00 p.m. Their mother kept track of the time they each stopped watching.

On Monday the times they stopped watching TV were 8:55 p.m., 11:00 p.m., 9:50 p.m., and 10:10 p.m.

On Tuesday the times they stopped watching TV were 9:00 p.m., 9:00 p.m., 8:40 p.m., and 7:10 p.m.

1. Jennifer watched TV for three hours on Tuesday.
2. Abigail watched less TV on Tuesday. Abigail only spent  $\frac{7}{13}$  as much time watching TV on Tuesday as she did on Monday.
3. Jasmine watched a total of four and one-half hours of TV on Monday and Tuesday.
4. Jennifer watched less TV on Monday. Jennifer only spent  $\frac{11}{36}$  as much time watching TV on Monday as she did on Tuesday.

Abigail stopped watching TV at \_\_\_\_\_ on Monday and \_\_\_\_\_ on Tuesday.

Jasmine stopped watching TV at \_\_\_\_\_ on Monday and \_\_\_\_\_ on Tuesday.

Jennifer stopped watching TV at \_\_\_\_\_ on Monday and \_\_\_\_\_ on Tuesday.

Ethan stopped watching TV at \_\_\_\_\_ on Monday and \_\_\_\_\_ on Tuesday.

Write an equation to represent this:

The difference between fourteen and six is eight.

\_\_\_\_\_

Mary took three numbers greater than 1 and multiplied them. One number was six and the other number was nineteen. Of course, she forgot the last number, but she remembered the product was 798. Is this possible?

Write the missing family fact.

$$120 \div 5 = 24$$

$$120 \div 24 = 5$$

$$5 \times 24 = 120$$

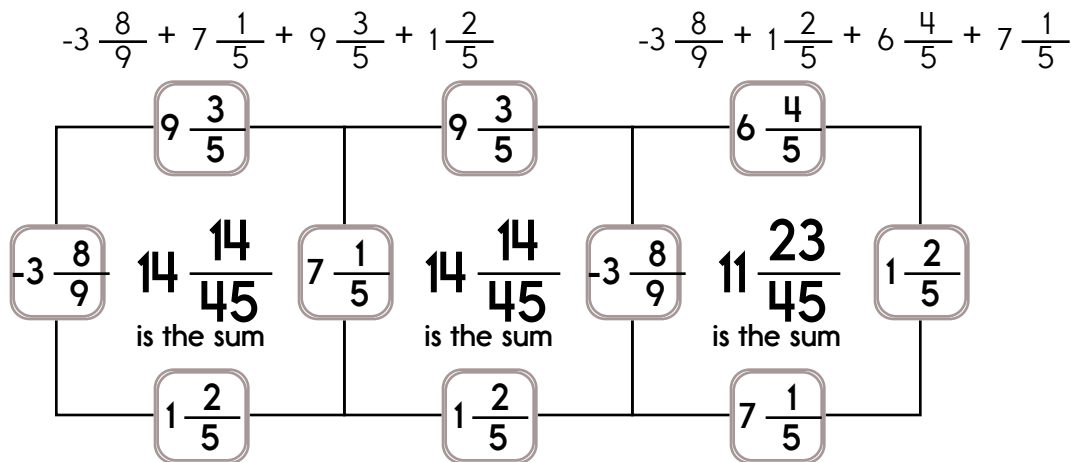
\_\_\_\_\_

$$367 - 118 = \underline{\hspace{2cm}}$$

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

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

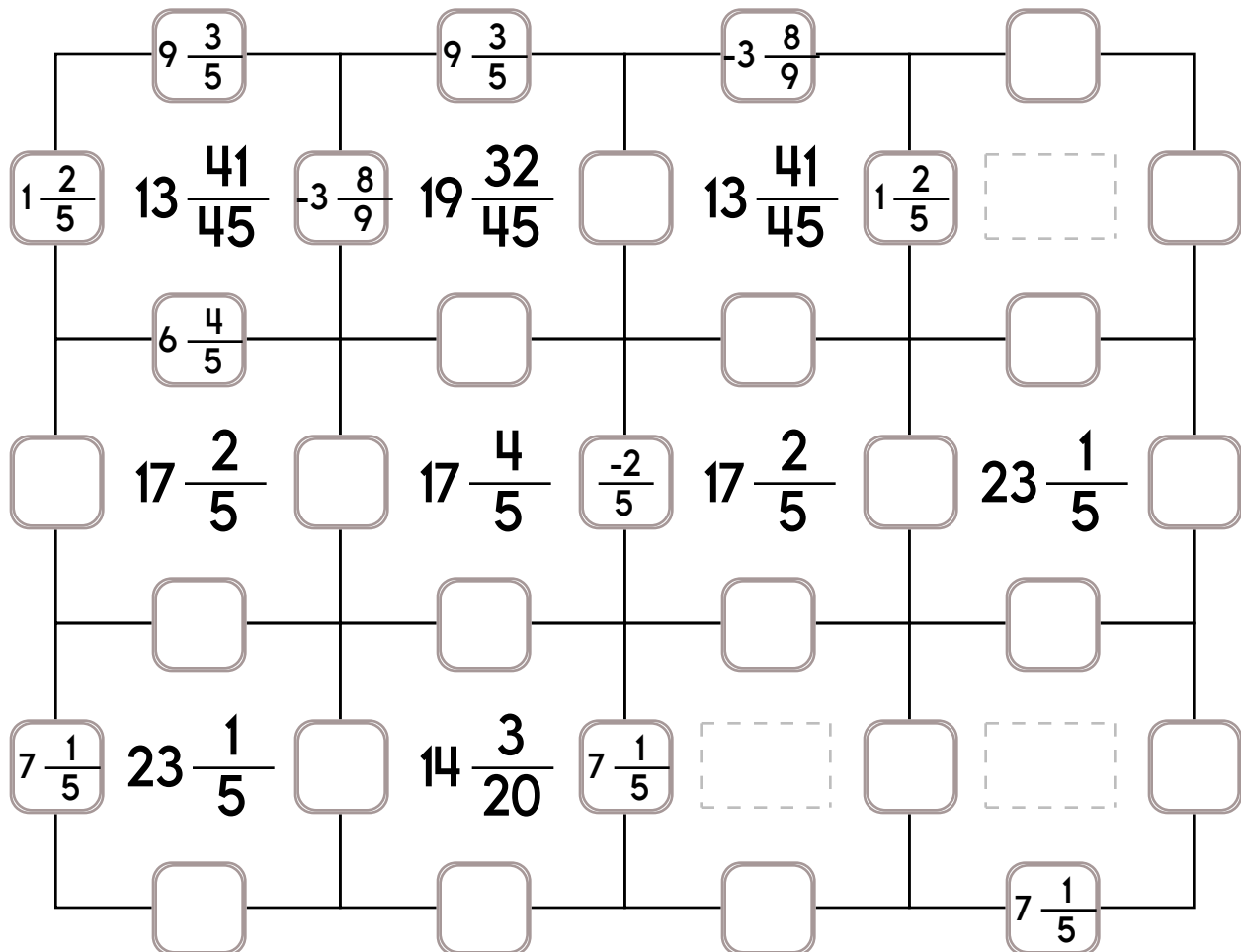
Sample:



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:  $-\frac{2}{5}$ ,  $-3\frac{8}{9}$ , or  $-1\frac{1}{4}$ .

The other three numbers have to all be DIFFERENT and must be from these:  $7\frac{1}{5}$ ,  $9\frac{3}{5}$ ,  $6\frac{4}{5}$ , or  $1\frac{2}{5}$ .



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:  $-2\frac{8}{9}$ ,  $-2\frac{1}{2}$ , or  $-\frac{1}{8}$ .

The other three numbers have to all be DIFFERENT and must be from these:  $3\frac{7}{9}$ ,  $2\frac{1}{3}$ ,  $7\frac{2}{3}$ , or  $4\frac{4}{9}$ .

	$7\frac{2}{3}$			$3\frac{7}{9}$		
$-2\frac{1}{2}$	$13\frac{7}{18}$	$4\frac{4}{9}$	$13\frac{7}{18}$	$-2\frac{1}{2}$	$11\frac{5}{18}$	$11\frac{17}{18}$
	$3\frac{7}{9}$			$7\frac{2}{3}$		
	$10\frac{31}{72}$		$10\frac{8}{9}$		$11\frac{5}{9}$	$11\frac{17}{18}$
	$14\frac{23}{72}$		$11\frac{5}{18}$		$8\frac{1}{18}$	$15\frac{55}{72}$
			13		$11\frac{5}{9}$	$11\frac{5}{9}$
	$13\frac{47}{72}$		$11\frac{5}{9}$			

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

There is a remainder of 6 when you divide 76 by 7.

Can you give three more examples of a number divided by 7 giving you a remainder of 6?

Nathan is trying to make as many cupcakes as he can, but he is down to his last 2 eggs. The recipe calls for 3 eggs, 3 cups of sugar, and 4 cups of flour. How much sugar and flour should he use?

a. What whole number when doubled is 66 less than when it is tripled?

b. What whole number when multiplied by 7 is 56 less than when multiplied by 11?

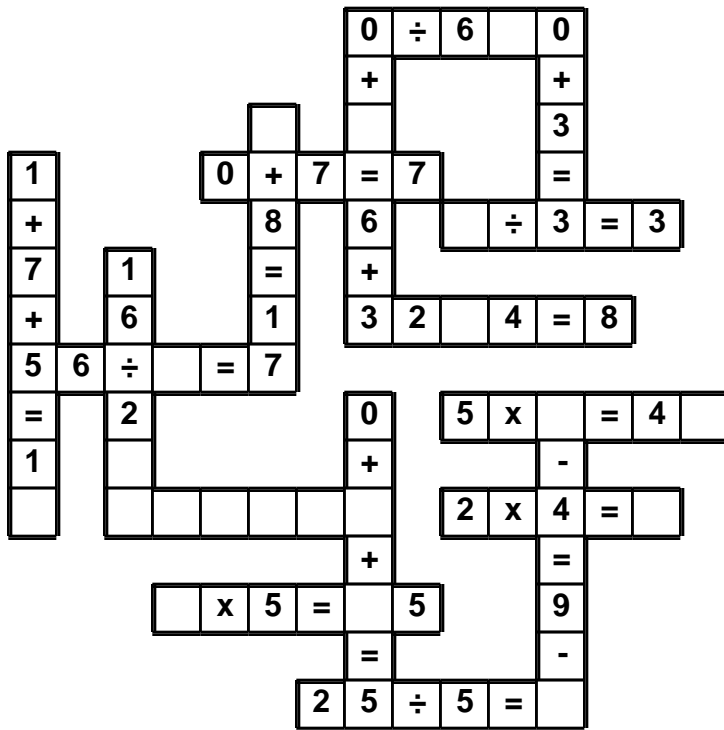
When you divide 39 by 5, you will get a quotient of 7 with a remainder of 4.

How many other different remainders can you get if you divide other whole numbers by 5? Give an example of each.

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

= • 9 • 9 • 9 • ÷ • 8 • 8 • 0 • = • 3 • 8 • x • 4 • = • 3 • 2 • 8  
7 • 3 • 5

Use the pieces above to help you fill in the runaway math puzzle.



$$3 + (35 \div 5) - 36 \div 9 =$$

$$|-8| - z = 6$$

$$z =$$

If  $m = -4$  and  $x = 27$  then  
what is  $6m - 14x + 4x = ?$

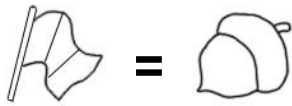
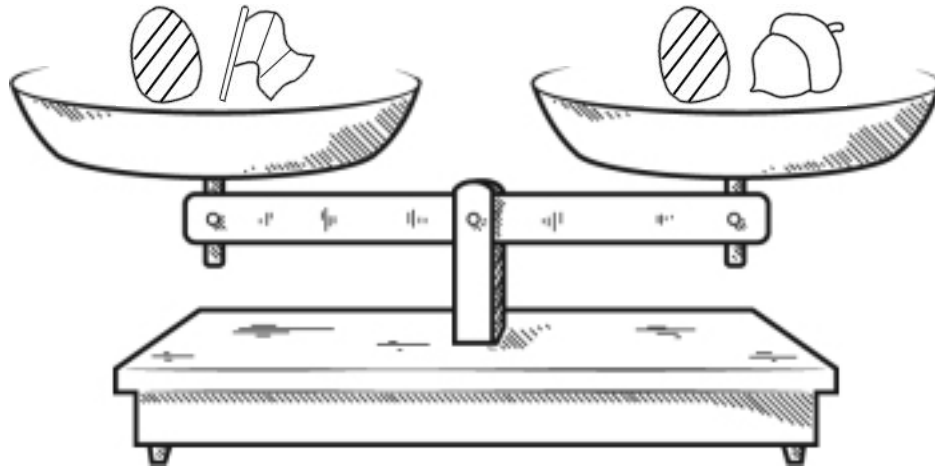
In what quadrant would  
you find the point  $(7, 13)$ ?

$$17.1957 \times 10^3 =$$

$$(9 - 1) \times 6 - 2 + 4$$

$$795 + 497 =$$

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



☐ True

☐ False



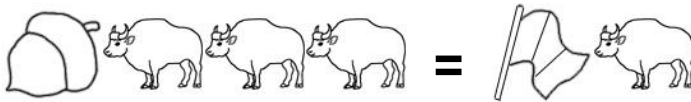
☐ True

☐ False



☐ True

☐ False



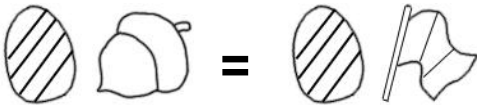
☐ True

☐ False



☐ True

☐ False



☐ True

☐ False



☐ True

☐ False



☐ True

☐ False



☐ True

☐ False

Did you find that four are true? If not, look again!

Hint: If you see the same pieces on both sides, you might need to remove both pieces.

You should only mark TRUE if you are absolutely sure it is correct!

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.

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

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

2 3 4 1

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

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

3 4 2 1

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

Hint - These numbers are missing:

4 3 2 1 1 1 3 2 1 1

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

Hint - These numbers are missing:

2 1 3 3 4 1 2 1 4 1



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

Fill in the missing numbers.

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

Hint - These numbers are missing:

3 1 1 3  
1 3 4

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

Hint - These numbers are missing:

4 3 3 4  
2 1 2 1

If  $a = 3$  and  $b = 60.4$ ,  
then  
 $2a + b - a =$

Simplify.

$$\frac{11,400}{34,200} =$$

$$(14 + 8 + 15) =$$

What is the area of a  
rectangle with a length  
of 55 centimeters and a  
width that is  $\frac{1}{5}$  the  
length?

Sara told the class that  
they should drink about 1.87  
liters of water per day.  
There are 15 kids in the  
class, including Sara. They  
will all try to do that. How  
much water will the class  
drink in a day?

$$\frac{3}{9} \times \frac{1}{9}$$

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

Draw 3 pictures in the correct order. Use each of the clues so you will know what to draw.



Draw 1 of these 3 pictures.  
The picture IS in the correct spot.



Draw 1 of these 3 pictures.  
The picture IS in the correct spot.

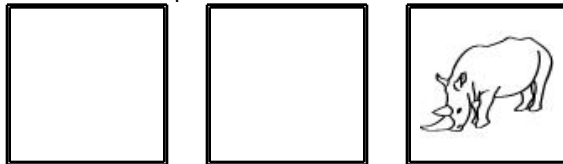


Draw 1 of these 3 pictures.  
The picture IS in the correct spot.



Draw 2 of these 3 pictures.  
The pictures to use are in the correct spot.

Draw the 3 pictures in the correct order:



Draw 4 pictures in the correct order. Use each of the clues so you will know what to draw.



Draw 1 of these 4 pictures.  
The picture IS in the correct spot.



Draw 1 of these 4 pictures.  
The picture IS in the correct spot.



Draw 1 of these 4 pictures.  
The picture IS in the correct spot.

Draw the 4 pictures in the correct order:



Draw 1 of these 4 pictures.  
The picture IS in the correct spot.



Draw 3 of these 4 pictures.  
None of those pictures are in the correct spot.

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.

1	2	3	2	5	1		1
5	4	5	1	3	4		
1	3	2	4	2	1		

An entire block with 5 spaces is blank. Since the block is 5 spaces it uses the numbers 1-5.

3 4 1 2 5

		4	2	5	4	2
	5	1	3	1	3	1
	3	4	5	4	2	5
	2	1	2	1	3	1

An entire block with 5 spaces is blank. Since the block is 5 spaces it uses the numbers 1-5.

2 5 1 4 3

1		3		2	1	2	1
4	2	1				3	4
3	5		2	4	1		1
2	1	4	1	5	3	4	5

Hint - These numbers are missing:

5 5 3 4 5 2 3

2	4		2	3		5	
5	1	5	4		2	1	2
2	4		3	5		3	4
3	1		1	2		5	

Hint - These numbers are missing:

1 1 2 5 3 3 1 4 4

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

### Sudoku Sums of 15

Each row, column, and box must have the numbers 1 through 9.  
Hint: Look for sudoku sums. The sum of the two boxes inside of the dashed lines is 15.

Here is an example of a sudoku sum of 15:

4	11
---	----

			1	7				9
		2	3		5	8		
						7	4	
7		1			6			4
	6		9					7
	5			2				3
	2	7						
1						3		
	4				3	6		

Circle the addition property  
for  $48 + 31 = 31 + 48$ .

associative property  
commutative property

$484 + 686 = \underline{\hspace{2cm}}$

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

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

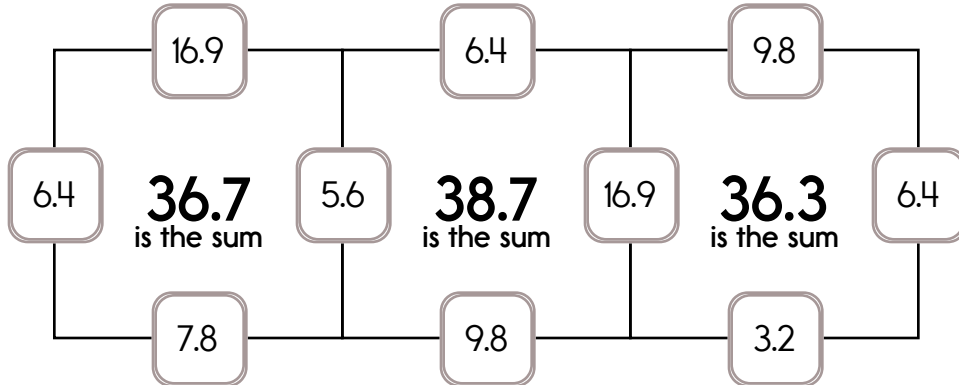
Example:

$$6.4 + 5.6 + 16.9 + 7.8 = 36.7$$

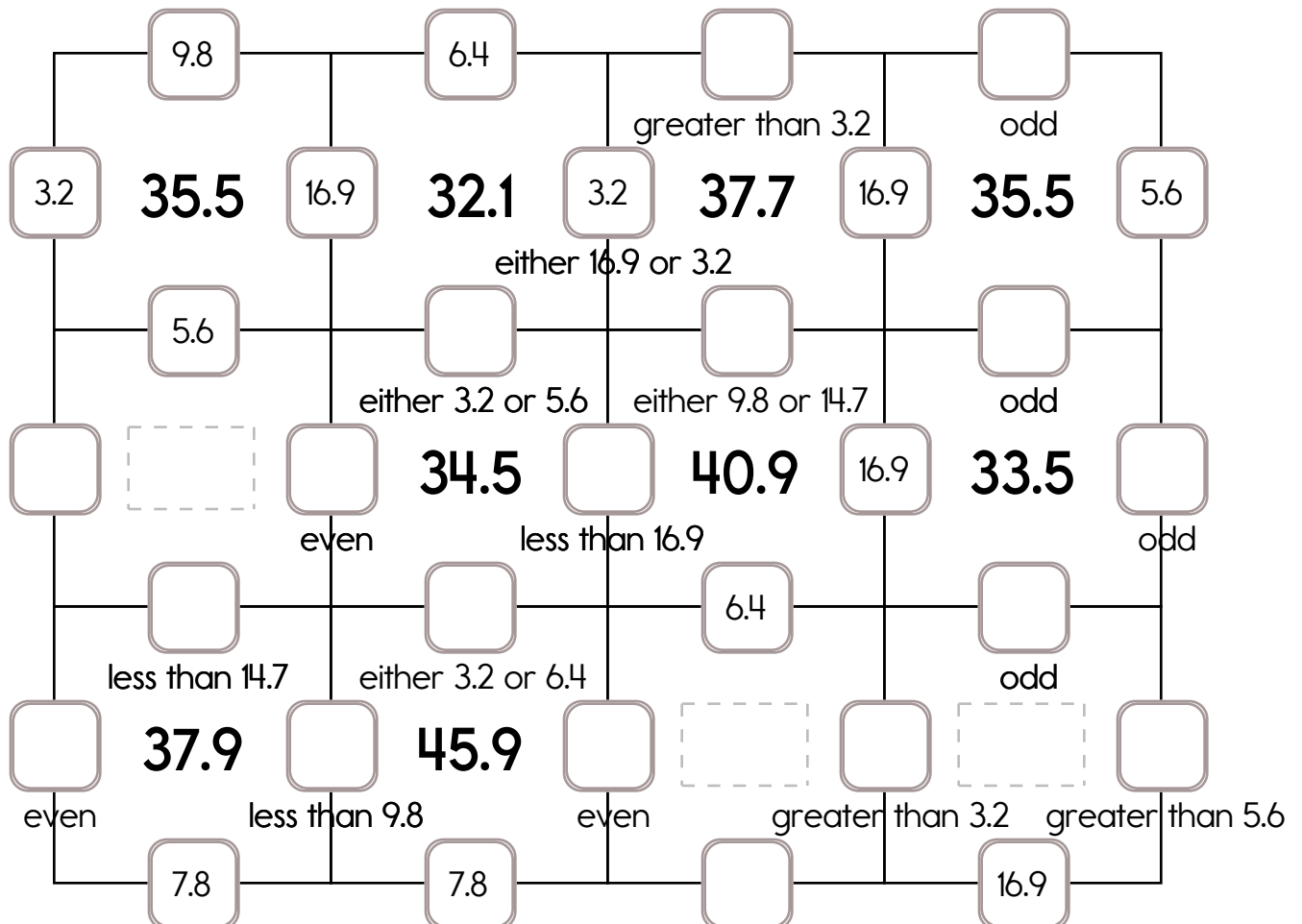
Example:

$$16.9 + 6.4 + 9.8 + 3.2 = 36.3$$

Sample:

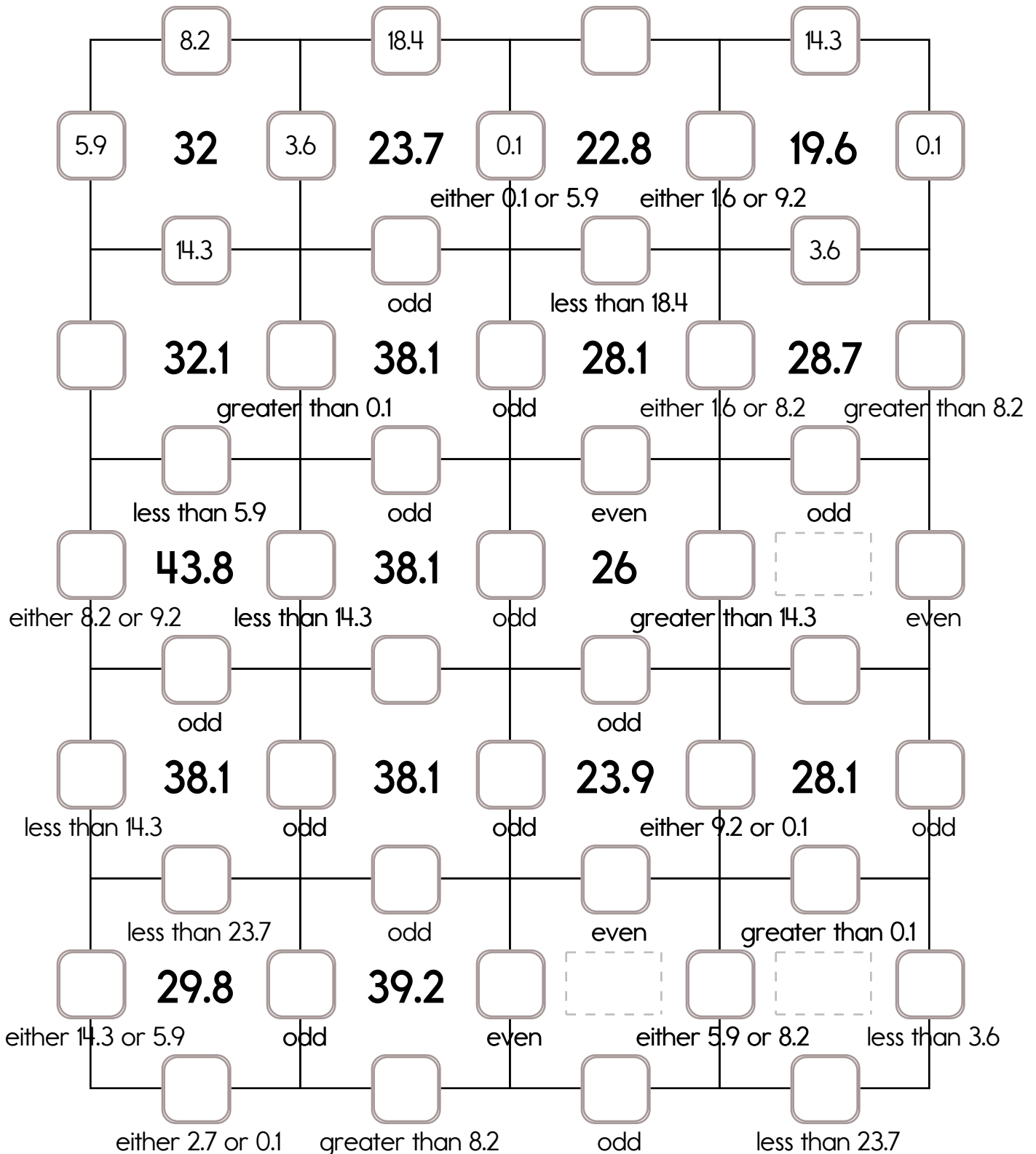


Fill in the missing numbers. How? The sum of the four surrounding numbers is in the center of each square. Exactly one of the four numbers has to be one of these numbers: 14.7, 16.9, or 26.1. The other three numbers have to all be DIFFERENT and must be from these: 6.4, 5.6, 1.3, 7.8, 9.8, or 3.2.



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: 23.7, 14.3, or 18.4.  
The other three numbers have to all be DIFFERENT and must be from these: 5.9, 1.6, 8.2, 2.7, 0.1, 9.2, or 3.6.





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