West Shore School District
Math Learning Packet
Fourth Grade

Dear Fourth Grade Families,

In an effort to keep your student engaged while schools are closed and to prepare your child for next school year, we have created this interactive mathematics packet. Each activity in this packet was selected for the level of engagement in meeting grade level mathematics standards as well as to encourage your child's thinking and reasoning in math. The activities can be completed every other day as a review of math skills. The important thing is that your child maintains their learning while being out of school during this unexpected school closure.

It is our hope that your student will be able to learn math at home in a fun and engaging way without added stress or anxiety about completing activities online. Feel free to reach out to the elementary math coach - Dan Grejda, (grades 3,4,5 activities) dgrejda@wssd.k12.pa.us for further clarification on the math activities in this packet.

Your partner in mathematical learning,

Mr. Dan Grejda
Instructional math coach at Washington Heights, Lower Allen/Rossmoyne, Hillside, and Highland

Non Technology Math Activities

Each day that your child does math, they should complete three components:

1. New information Activity
2. Math Fact Fluency
3. Independent Activity

New Information Activity:
This is an activity that goes along with new information that may have not been previously taught in class. They should be done in order and they are a MUST DO.

Math Fact Fluency:
These activities are designed to be completed multiple times throughout this program. The fact triangles and Math 24 games have an explanation page. The fact triangles, Math 24 cards, and flash cards need to be cut out. Each math day review ONE of the activities for approximately 15 minutes.

Independent Activity:
These activities are designed to enrich and extend the mathematical process. When the directions ask for an explanation, please use complete sentences. They can be done in any order. Complete one every math day

Math Card Games:
These are designed to have two or more players and can be used as a SUBSTITUTE for any of the Math Fact Fluency activities. The directions are explained at the end of the Math Fact Fluency pages. If you do not have access to a deck of cards, please cut out the three sets of 1-10 numbers that follow the instructions. You will NOT need fact cards or aces for any of the games.

Additional Math Activities:
These activities can be used for any math day NOT covered by the dates listed above. They can also be used as a substitute for any of the Independent Activities throughout this program. If your child enjoys one of the styles of activities, they may do theses in place of any other style of Independent Activity.

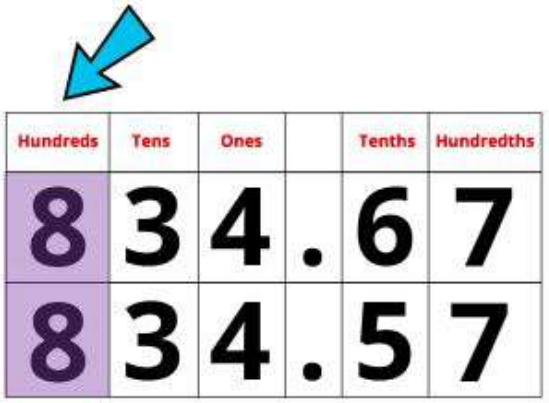
Grade 4 First Cycle of Math

New Information (Must Do)	**Compare Decimals** Day 1 Traditional Problems Day 2 Comparing and Ordering Decimals Day 3 Pet Store Cage Problem
Fact Fluency Options (Choose 1 Each Math Day, 15 mins)	Flash Cards Math 24 Cards Triangle Flash Cards
Independent Work Options (Complete 1 Each Math Day)	Convince Me That… Open Middle Problem Number Sense Puzzle
Math Card Game Option	I Spy

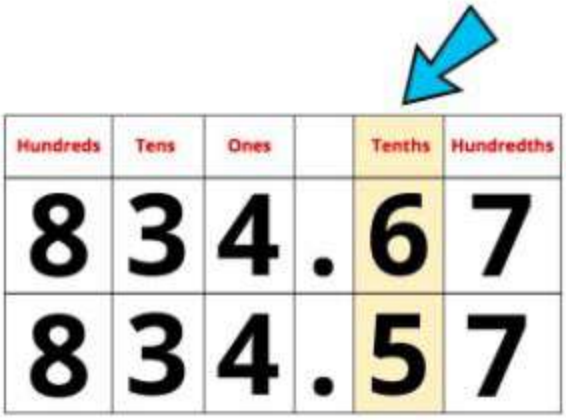
Comparing Decimals

Line up the decimal points of each number vertically.

Start at the left and compare the place values until You find two digits that are NOT the same.



Hundreds	Tens	Ones		Tenths	Hundredths
8	3	4	.	6	7
8	3	4	.	5	7



Hundreds	Tens	Ones		Tenths	Hundredths
8	3	4	.	6	7
8	3	4	.	5	7

Once you find digits that are DIFFERENT, the larger digit means that number is GREATER.

834.67 is GREATER than 834.57 or 834.67 > 834.67

Day 1 Comparing Decimals

Compare each pair of decimals using the symbols >, < or =.

1) 43.5 ☐ 43.12

2) 18.49 ☐ 19.9

3) 21.75 ☐ 21.75

4) 4.63 ☐ 4.3

5) 5.17 ☐ 5.4

6) 10.35 ☐ 10.35

Fill in each _____ with a digit to make the decimal comparison true.

15.27 > 15.__ 8

34.67 < 34.__ 3

21.72 > 21.__ 5

71.10 < 71.__ 9

23.43 > 23.4__

87.02 > 87.0__

58.29 > 58.2__

42.22 > 42.2__

Day 2 Comparing and Ordering Decimals

Identify where the following decimals belong on the chart. List them in the appropriate column.

0.59 0.97 0.48 0.82 0.13 0.03 0.65 0.36

Close to Zero	About 1/2	Close to One

Now place each decimal in order on the number line.

Day 3
Bunny Cage Weight Limits

Cage A:
Up to 3 pounds (lbs)

Cage B:
Up to 2.5 pounds (lbs)

Cage C:
Up to 1.75 pounds (lbs)

Rex	2.67 lbs	Thumper	1.87 lbs	Sunday	0.89 lbs
Millie	1.25 lbs	Penny	2.48 lbs	Rainbow	1.7 lbs
Buddy	2.25 lbs	Chip	2.79 lbs	Zoey	2.83 lbs

Using the pictures and chart above, identify which cage would be best for each animal. You only have 3 of each cage to use. For example you could NOT recommend that four different bunnies use cage B.

Cage A	Cage B	Cage C

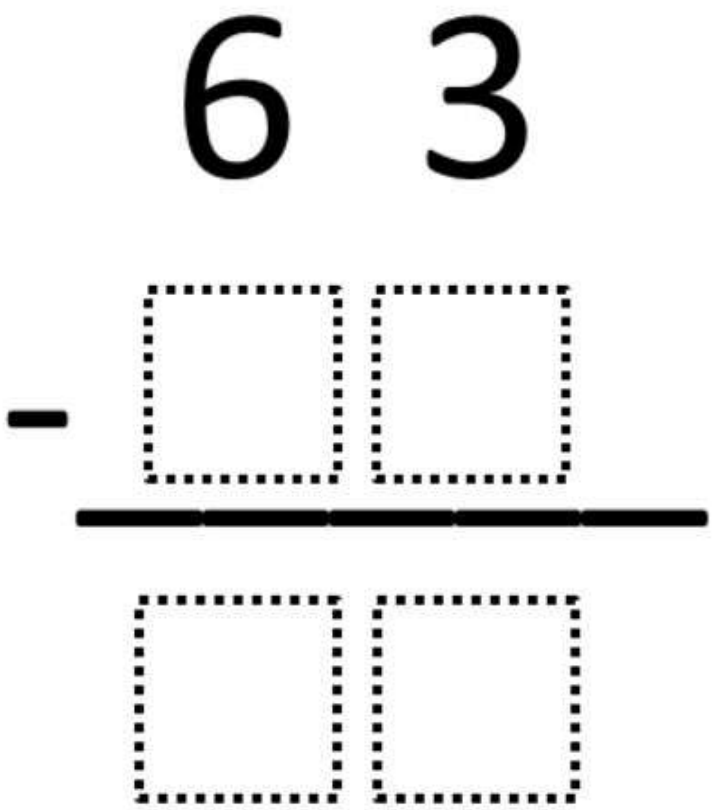
Convince me that...

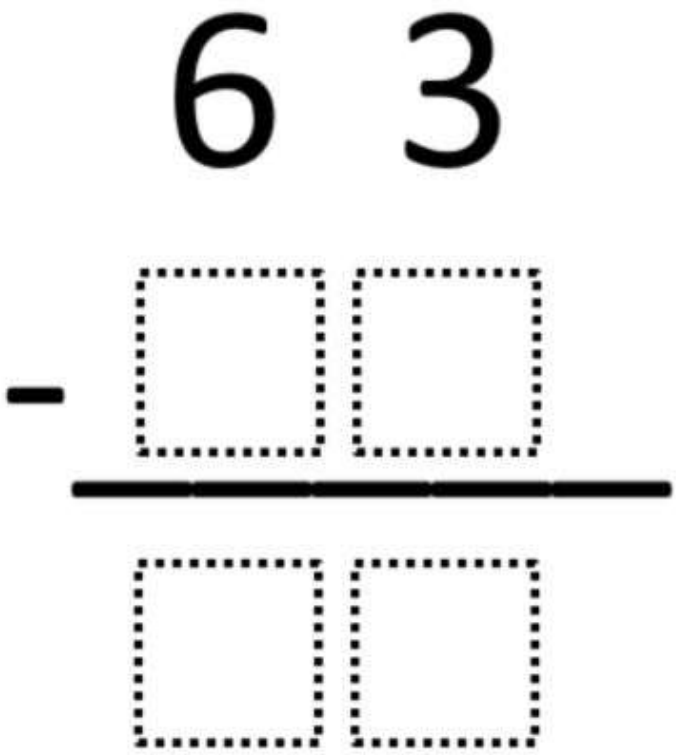
$$\frac{1}{3} < \frac{3}{4}$$

The above statement is correct. Your job is to explain WHY it is a correct statement. You may use words, pictures or a combination of both to explain.

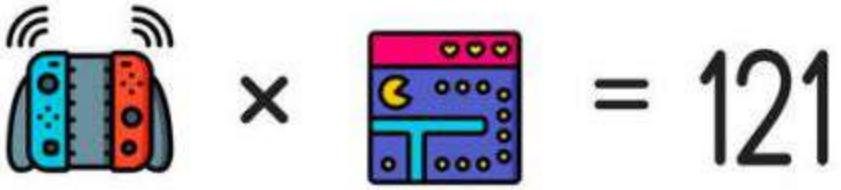
Open Middle

Using only digits 1-9 without repeating a digit, fill in the boxes to make the problem true. See if you can get more than one correct but different looking answer.





Number Sense Puzzle

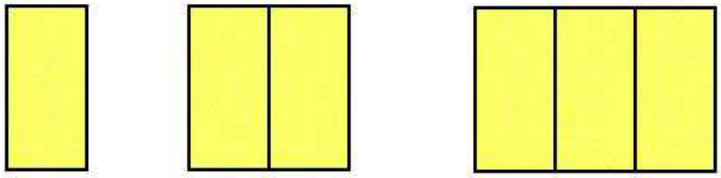


What is the value of the last line: Switch Remote times X-Box Remote?

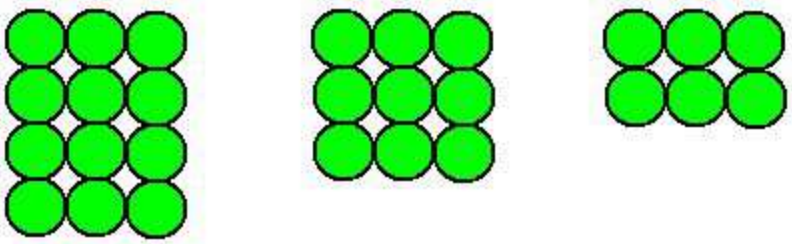
Hint: Start with the second row, 12 times Switch Remote!!!

Grade 4 Second Cycle of Math

New Information (Must Do)	**Analyzing Patterns: Numeric and Geometric** Day 4 Geometric Patterns Day 5 Numerical Patterns Day 6 Tickets to Win Problem
Fact Fluency Options (Choose 1 Each Math Day, 15 mins)	Flash Cards Math 24 Cards Triangle Flash Cards
Independent Work Options (Complete 1 Each Math Day)	Convince Me That… Open Middle Problem Number Mystery
Math Card Game Option	Multiplication Top It



Sometimes the pictures **increase** by a certain amount. In this case, the number of rectangles increases by 1.

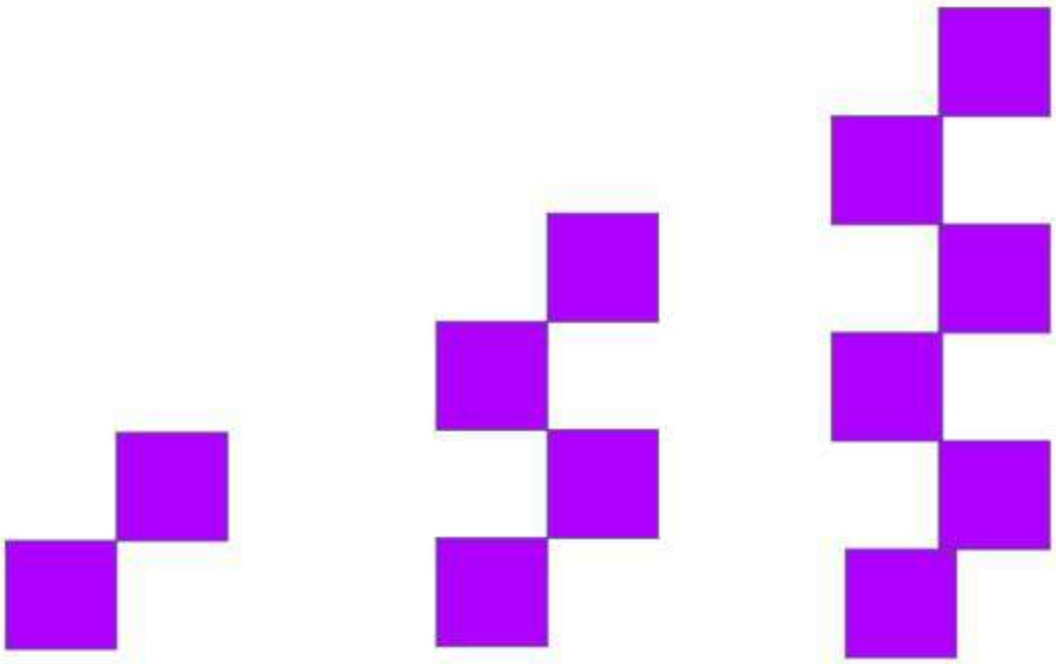


Sometimes the pictures **decrease** by a certain amount. In this case, the number of circles decreases by 3.

Patterns repeat in a way that any term of the pattern can be determined by following a rule.

A **rule** is the instruction for the pattern that describes the action.

Day 4 Geometric Patterns

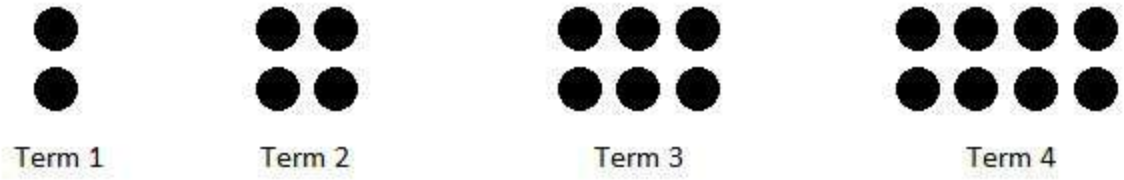


Design 1 Design 2 Design 3

What will the pattern look like in Design 12?

How many tiles will be in this pattern?

_____ Tiles



Term 1 Term 2 Term 3 Term 4

Describe the rule in the above pattern. _____

Draw below what it would look like on the 9th term

Day 5 Numeric Patterns

Solve for the next for numbers in the pattern.

5, 14, 24, 35, 47, _____ ,_____ ,_____ ,_____

Describe the rule for the pattern: _____

_____

What would the 14th number be in the pattern above. _____

Explain how you know_____

_____

_____

_____

Create a pattern that shows each number growing 3 times larger than the previous number. Start the pattern with a single digit number.

_____ ,_____ ,_____ ,_____ ,_____ ,_____ ,_____ ,_____

Create a pattern that subtracts 3 each time. Start at a number larger than 32.

_____ ,_____ ,_____ ,_____ ,_____ ,_____ ,_____ ,_____

Day 6 Tickets to Win

Tyler is collecting classroom tickets to try to earn enough to exchange for a big prize. To meet this goal he must earn 80 tickets before the prize cart comes, which is just 6 weeks away. The first week Tyler earns 5 tickets, the second week he earns 8, and 11 tickets the third week.

Will Tyler earn enough tickets to win the prize if the above pattern continues?

Show and Explain your work below

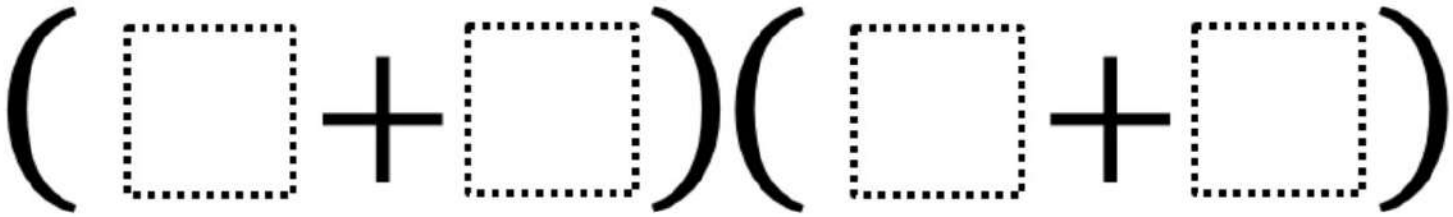
Convince me that...

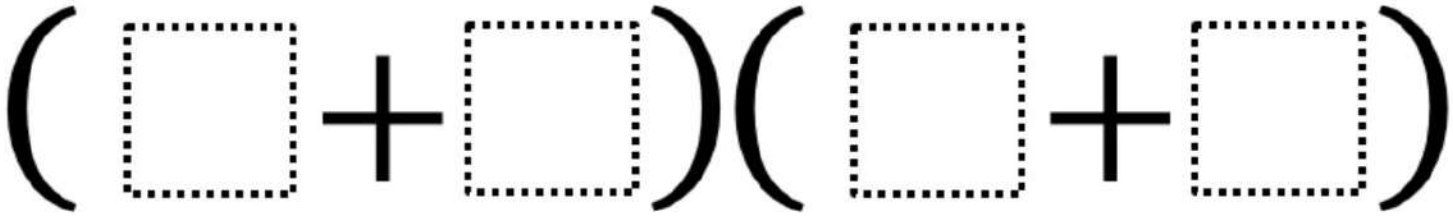
1/2 of a pizza is equivalent to 4/8 of pizza.

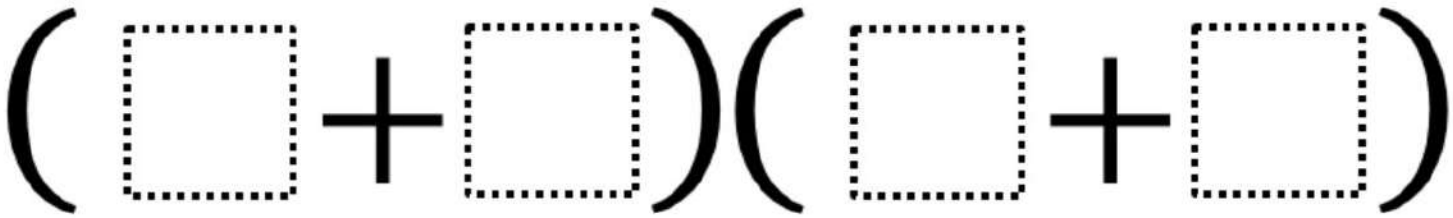
The above statement is correct. Your job is to explain WHY it is a correct statement. You may use words, pictures or a combination of both to explain.

Open Middle

Using the digits 1-9 NO MORE than one time each, place the digits in the box to make the largest answer possible. Try multiple times to try and get a larger answer than before. (Remember that you must add the two numbers inside the parentheses first, then multiply the two sums)







Number Mystery

_____ _____ _____ **Hundreds Digit Tens Digit Ones Digit**	My value is a multiple of ten The sum of my digits is equal to ten My hundreds digit is equal to six more than my tens digit My tens digit is a two
_____ _____ _____ **Hundreds Digit Tens Digit Ones Digit**	My value is odd The sum of my digits is equal to ten My tens digit is equal to zero My tens digit is less than my ones digit My ones digit is less than eight
_____ _____ _____ **Hundreds Digit Tens Digit Ones Digit**	My tens digit is equal to two times my hundreds digit My tens digit is equal to six The sum of my digits is equal to fourteen
_____ _____ _____ **Hundreds Digit Tens Digit Ones Digit**	My value is a multiple of ten The sum of my digits is equal to two Not all of my digits are the same My hundreds digit equal to my tens digit

Grade 4 Third Cycle of Math

New Information (Must Do)	**Measurement: Find Equivalence in Units of Measure** Day 7 Length Day 8 Time Day 9 Money
Fact Fluency Options (Choose 1 Each Math Day, 15 mins)	Flash Cards Math 24 Cards Triangle Flash Cards
Independent Work Options (Complete 1 Each Math Day)	Visual Patterns Math Puzzle Estimation 180
Math Card Game Option	Hit the Target

Standard Conversions

1 yard (yd) = 3 feet (ft)
1 foot = 12 inches (in.)

1 pound (lb) = 16 ounces (oz.)

1 gallon (gal) = 4 quarts (qt)
1 quart = 2 pints (pt)
1 pint = 2 cups (c)

Time Conversions

1 year (yr) = 12 months (mo)
1 year = 52 weeks (wk)
1 year = 365 days
1 week = 7 days
1 day = 24 hours (hr)
1 hour = 60 minutes (min)
1 minute = 60 seconds (sec)

Metric Conversions

1 kilometer (km) = 1,000 meters (m)
1 meter = 100 centimeters (cm)

1 kilogram (kg) = 1,000 grams (g)

1 liter (L) = 1,000 milliliters (mL)

Day 7 Length Problems

Use the conversion chart on the previous page to complete the following problems

Convert the given measures to new units.

1. 35 ft = _____ in
2. 60 in = _____ ft
3. 74 in = _____ yd
4. 36 yd = _____ in
5. 78 in = _____ yd
6. 41 ft = _____ yd

A fourth grade class of 20 students earned a root beer float party. To make one root beer float you need 250 milliliters of root beer.

How many 2 liter bottles of root beer does the teacher need to buy for the root beer float party?

(Hint: Find out how many millimeters are in 1 liter first, then find out how many are in two liters).

The teacher needs to buy _____ 2 liter bottles of soda.

Draw a picture below to support your answer

If a 2 liter bottle of root beer costs $1.85. How much will the teacher spend on root beer?

The teacher will spend _____ on root beer.

Day 8 Time Problems

Problem	Answer (with unit)
Sam and his mom arrive at the doctor's office at 2:30 p.m. They see the doctor at 3:10 p.m. How long was their wait?	
Dad says dinner will be ready in 35 minutes. It's 5:30 p.m. now. What time will dinner be ready?	
Becky is meeting her friend at the library at 12:45 p.m. It takes her 25 minutes to get to the library. What time will she need to leave her house to arrive on time?	
Ethan's birthday party started at 4:30 p.m. The last guest left at 6:32 p.m. How long did Ethan's party last?	
Kayla put cupcakes in the oven at 3:41 p.m. The directions say that the cupcakes need to bake for 38 minutes. What time will Kayla need to take them out of the oven?	

Caleb spent 3 hours and 45 minutes at a party. His friend arrived 15 minutes after Caleb did. Caleb and his friend left the party at the time shown on the clock.

At what time did Caleb's friend arrive at the party?

Day 9 Money Problems

Margie bought 3 apples that cost 50 cents each. She paid with a five-dollar bill. How much change did Margie receive?

Step 1: Cost of the 3 apples_____

Step 2: Difference between apple total cost and $5 bill_____

The table below shows the prices of several items at a clothing store.

Item	Price
hat	$3.70
t-shirt	$2.10
scarf	$2.60
jacket	$1.75
hoodie	$1.40

Nancy had $5.00 when she went to the store. If she bought 1 scarf what is the most expensive item she can buy with the money she has left?

Step 1: Difference between scarf and $5.00 _____

Step 2: Compare difference in step 1 and prices on the chart _____

Organic Fruits

Apples	$2.71
Oranges	$2.73
Pears	$1.46
Cherries	$4.21
Peaches	$2.31

If you paid with a 20 dollar bill, how much change would you receive?

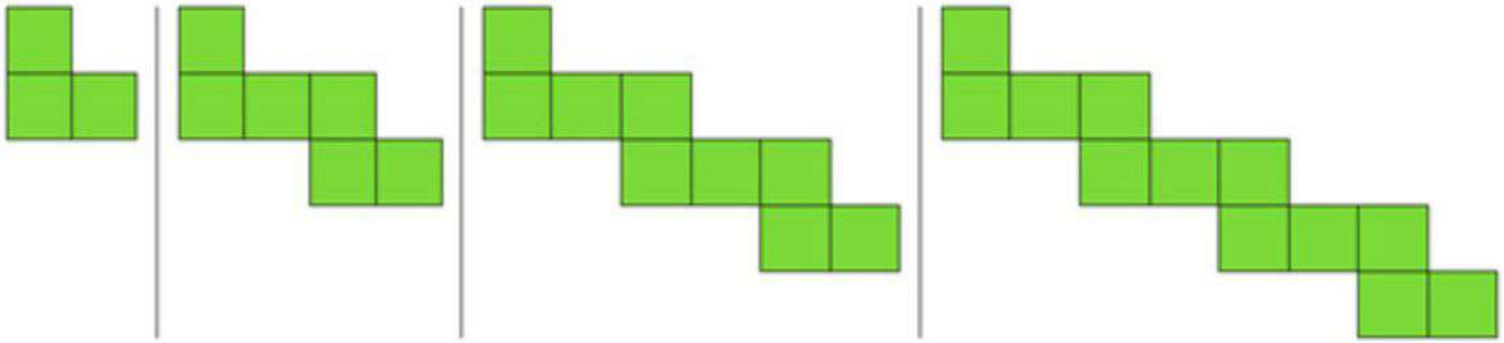
Step 1: Calculate sum of all items

_____

Step 2: Calculate difference between sum and $20.00

_____

Visual Patterns



Describe the above pattern in words.

_____

_____

_____

_____

The first four steps in the pattern are shown above. How many blocks would be in the 9th step if the pattern continued?

_____ Blocks

Explain how you know.

_____

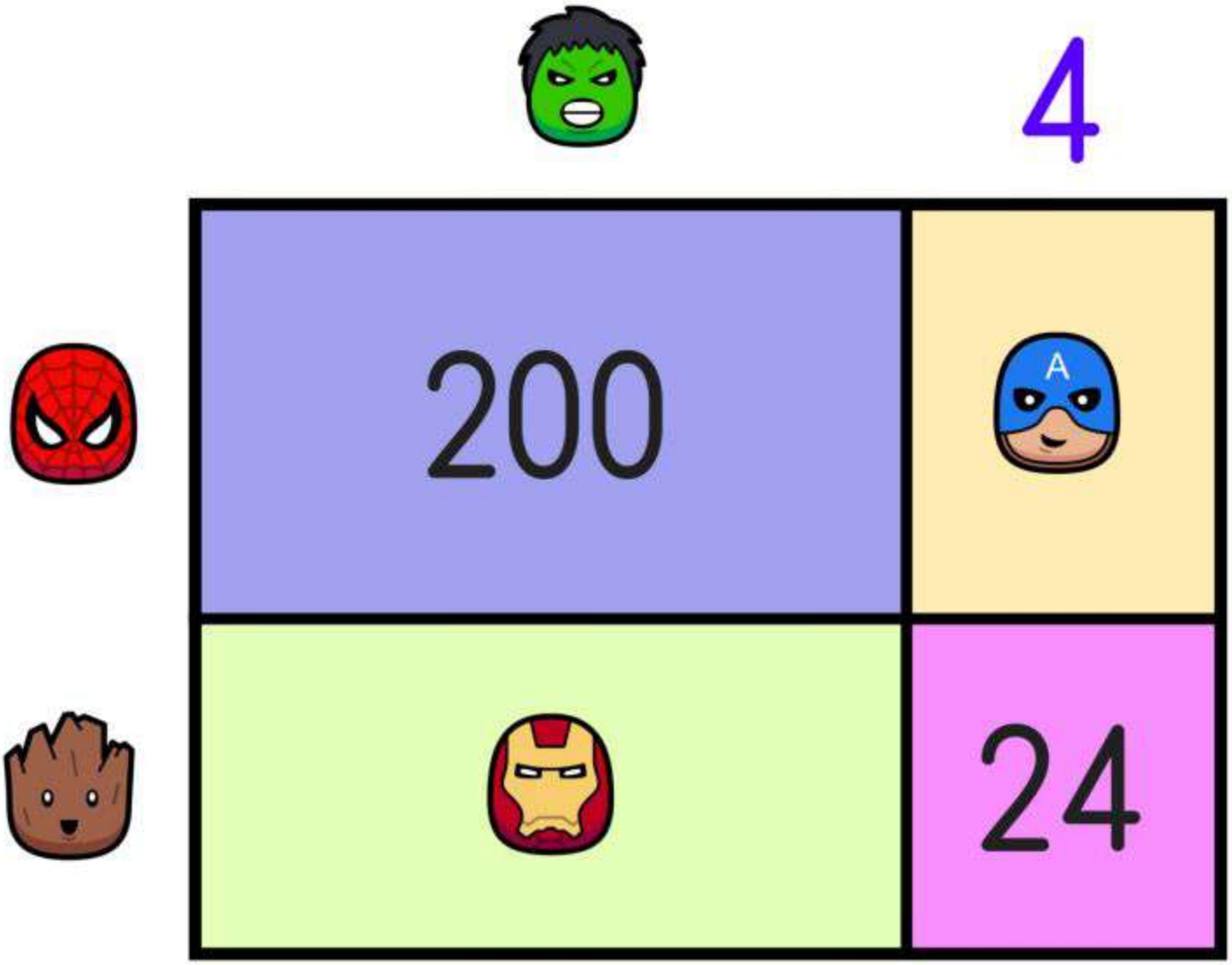
_____

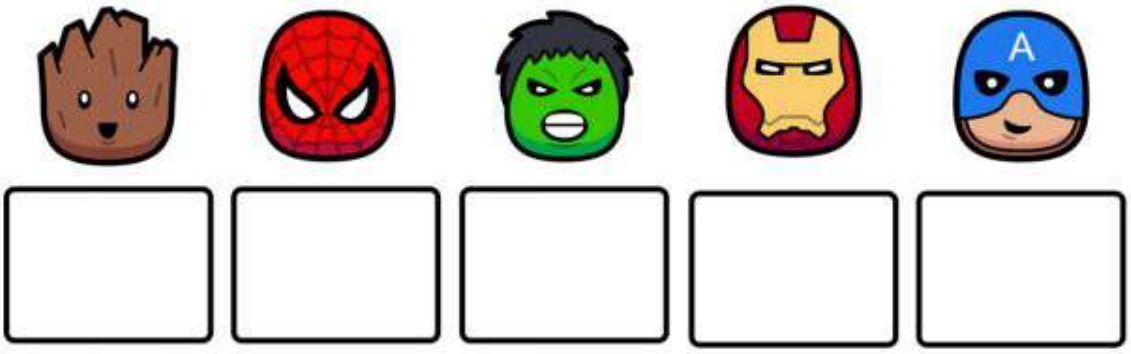
_____

_____

Number Puzzle

Look at the multiplication area model below. Find the values of the characters by using what you know about multiplication. (Remember the size of the rectangles determines their value. So Captain America's rectangle is larger than 24, so his value must be greater than 24)





Estimation 180

Answer the questions below by looking at the picture.

What is the value of ALL the coins in the bowl?

Write down an answer you know is too LARGE _____

Write down an answer you know is too SMALL _____

Write down an ESTIMATE the value of all of the coins in the bowl._____

Explain how you got your estimate.

_____

_____

_____

Grade 4 Fourth Cycle of Math

There is no new information for this cycle. For each day complete two independent work activities and 15 minutes of fact fluency.	Day 10 Two Independent Work Activities Day 11 Two Independent Work Activities Day 12 Two Independent Work Activities
Fact Fluency Options (Choose 1 Each Math Day, 15 mins)	Flash Cards Math 24 Cards Triangle Flash Cards
Math Card Game Option	Multiplication Top It

Multiplication Squares

Complete the multiplication squares. Look at the example below for detailed instructions.

For each of the squares below, fill in the boxes so that **the first two numbers in each column and row multiplied together equal the third number**.

2	2	4
4		12
8	6	48

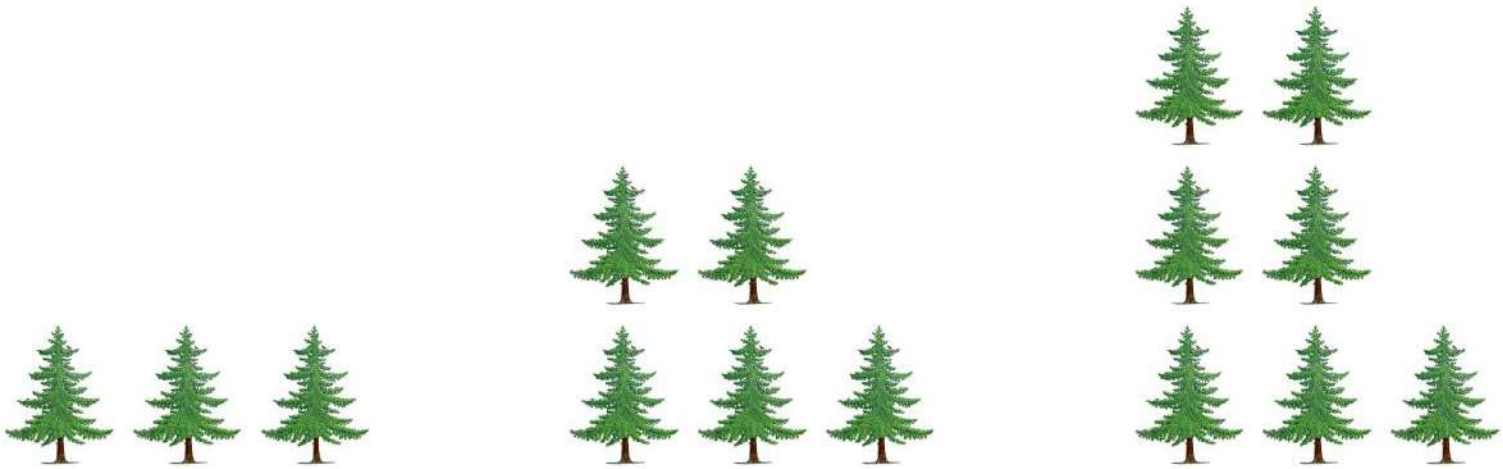
2		4
6		
		12

	3	9
		4
6		

5		5
2		
	3	

	6	
		7
	6	42

Visual Patterns



Describe the above pattern in words.

_____

_____

_____

_____

The first three steps in the pattern are shown above. How many trees would be in the 8th step if the pattern continued?

_____ Trees

Explain how you know.

_____

_____

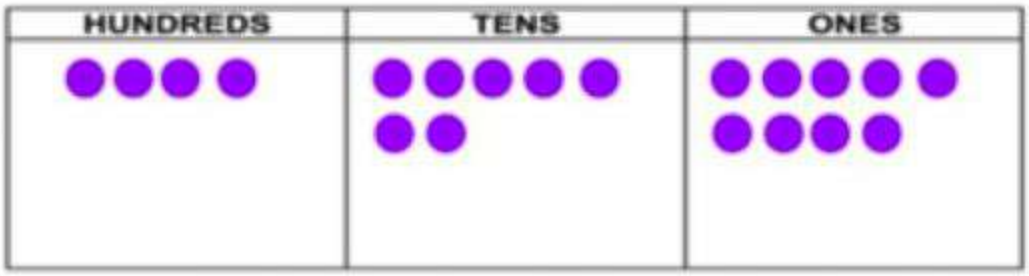
_____

_____

Math Puzzle

Two of these pictures are correct and one is incorrect. Identify which one is wrong and describe why it is wrong. Then describe what would need to be changed to make it correct.

(1)



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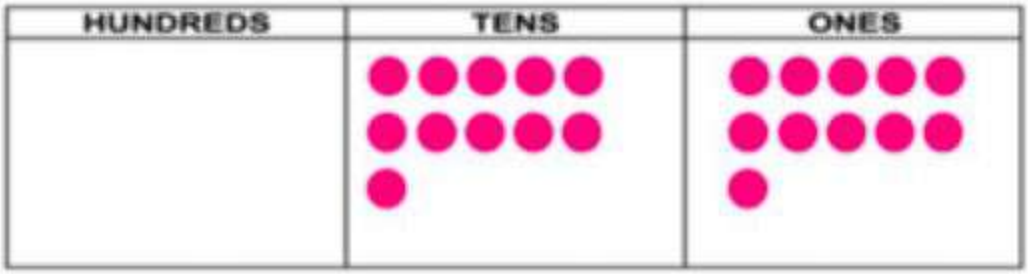
(2)



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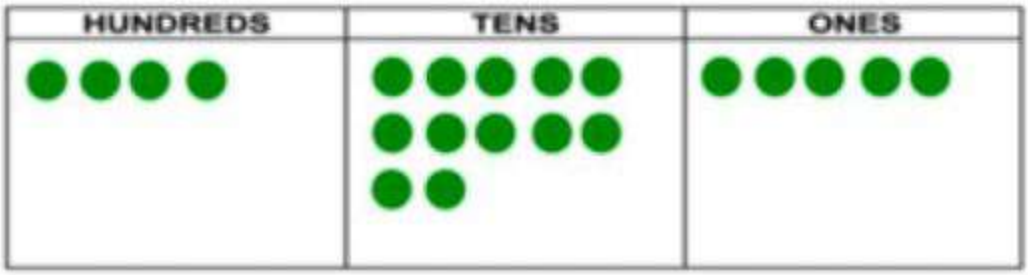
(3)



525

Number _____ is incorrect.

Explain how you know and what would need to be changed.

_____

_____

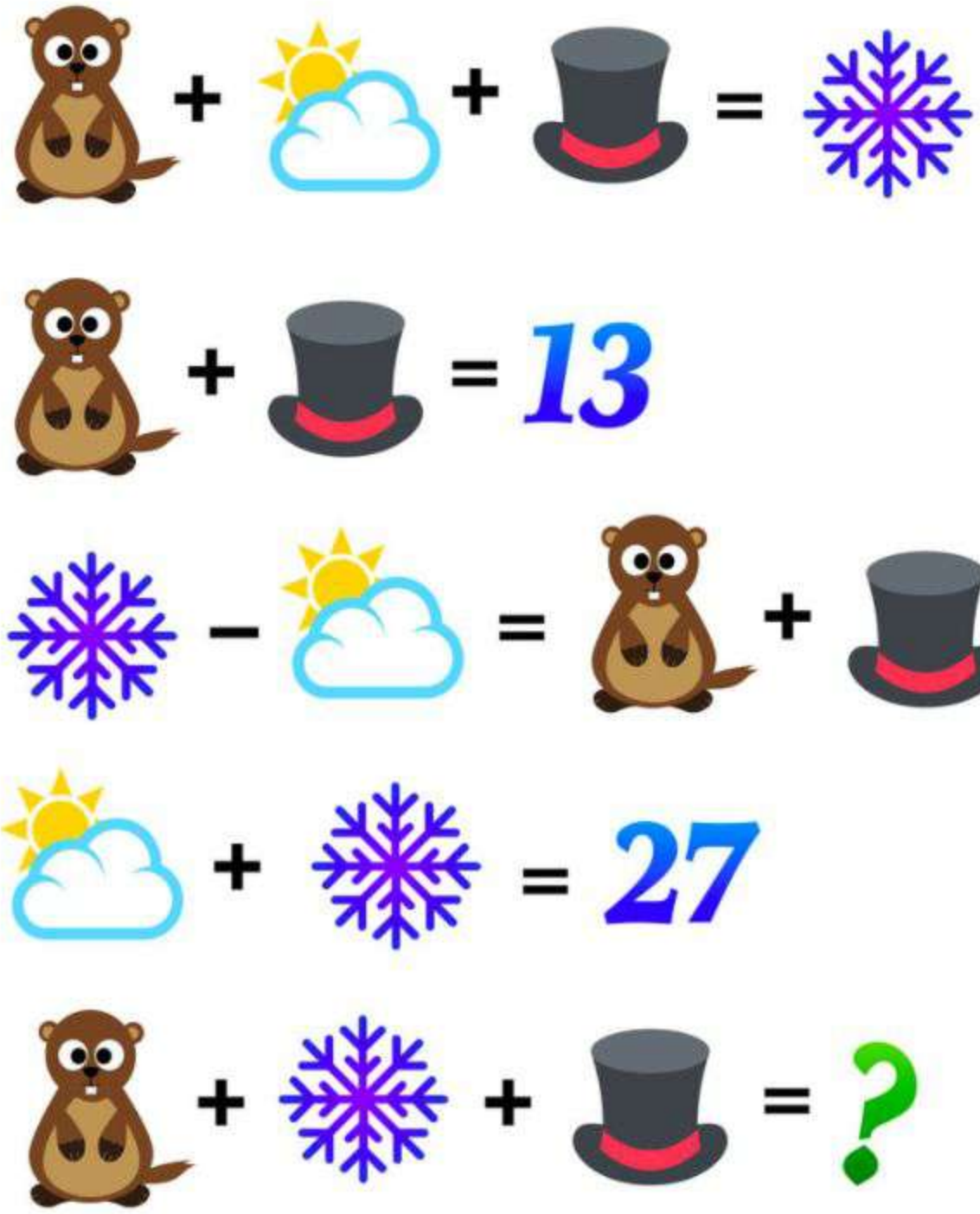
_____

_____

Open Middle

Using the digits 1 to 9, at most one time each, fill the boxes below to create a quotient as close to zero as possible. Try multiple times to try and get a smaller answer than before.

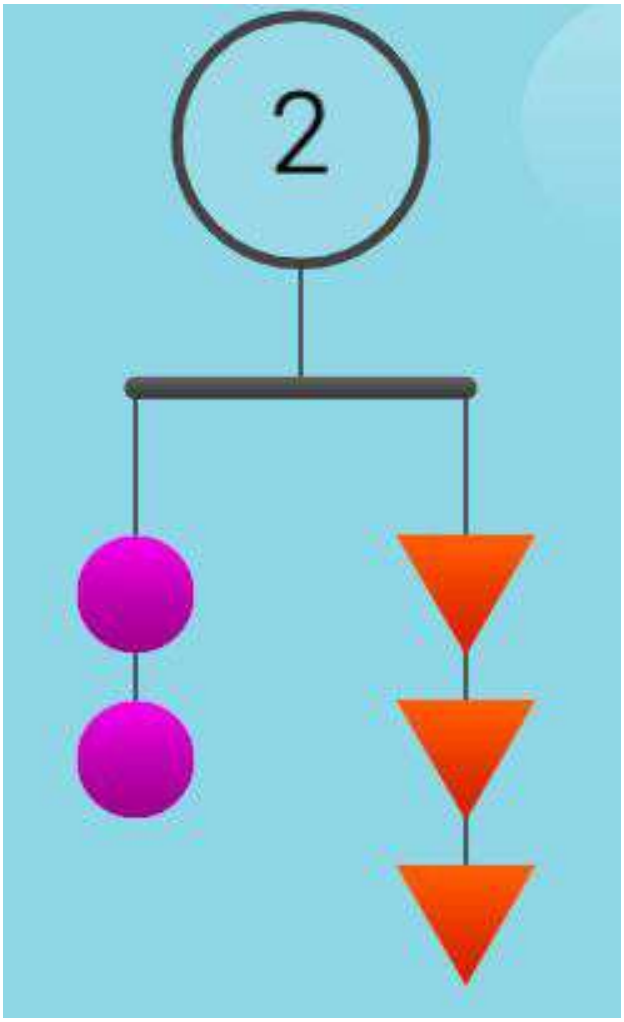
Number Puzzle



What is the value of the last line: Groundhog plus snowflake plus top hat?

Hint: Start with the second row or the fourth row!!!

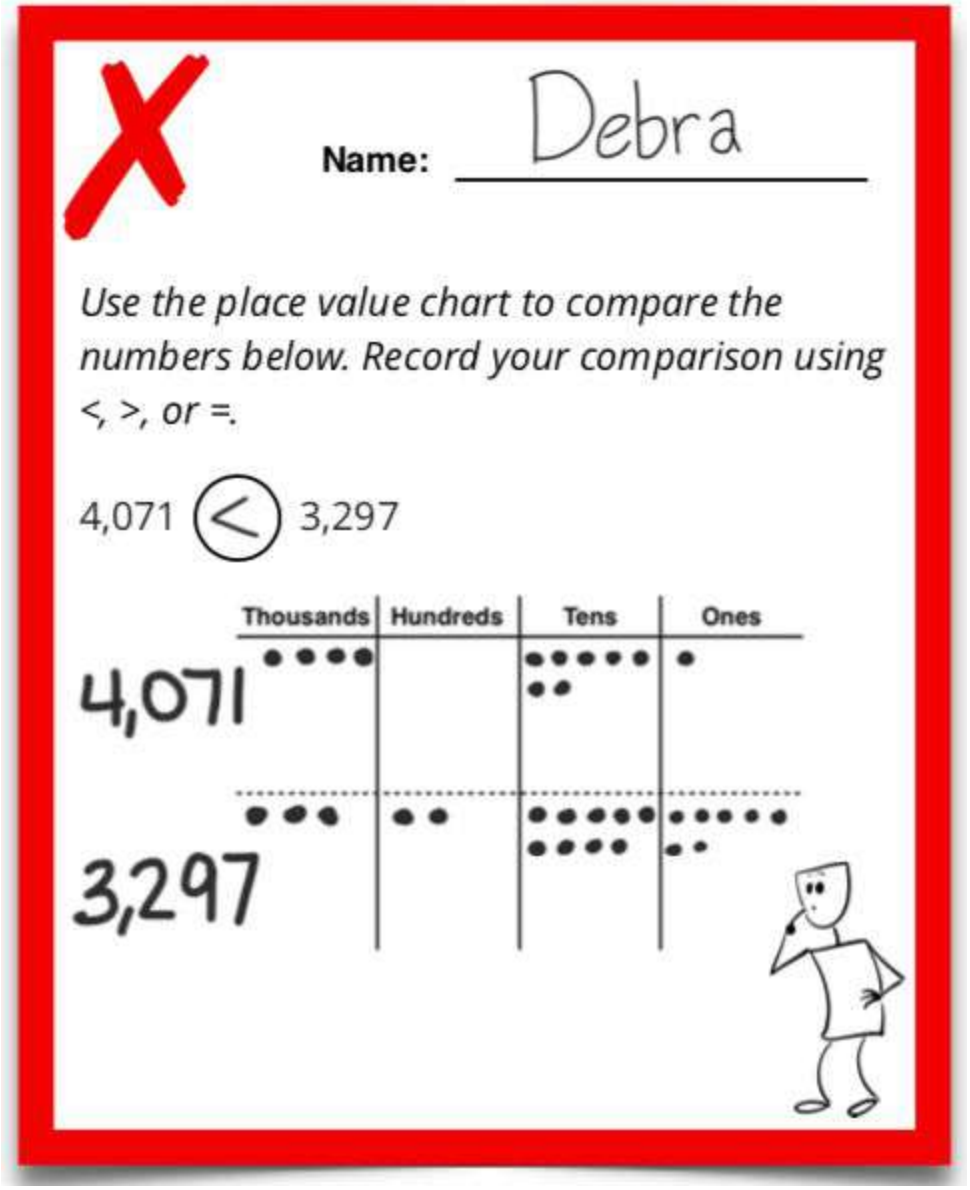
Number Balance



Both sides of the mobile must equal each other to make it balanced. If the total of both sides has a combined value of 2, what is the value of each circle and each triangle?

Grade 4 Fifth Cycle of Math

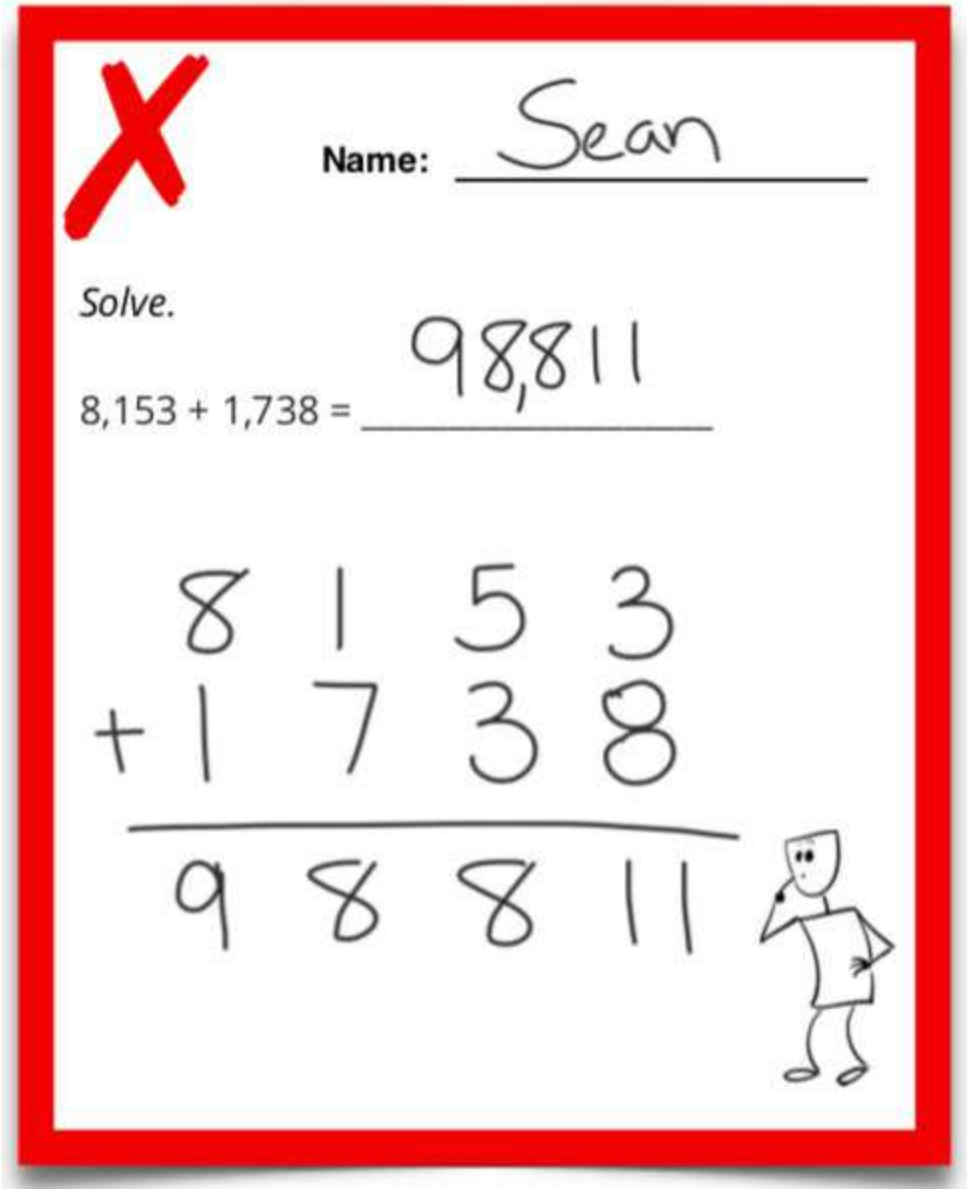
This is a review cycle. For each math day complete two error analysis activities and 15 minutes of fact fluency.	Day 13 Two Error Analysis Activities Day 14 Two Error Analysis Activities Day 15 Two Error Analysis Activities
Fact Fluency Options (Choose 1 Each Math Day, 15 mins)	Flash Cards Math 24 Cards Triangle Flash Cards
Math Card Game Option	I Spy



Debra compared the total dots for each number.

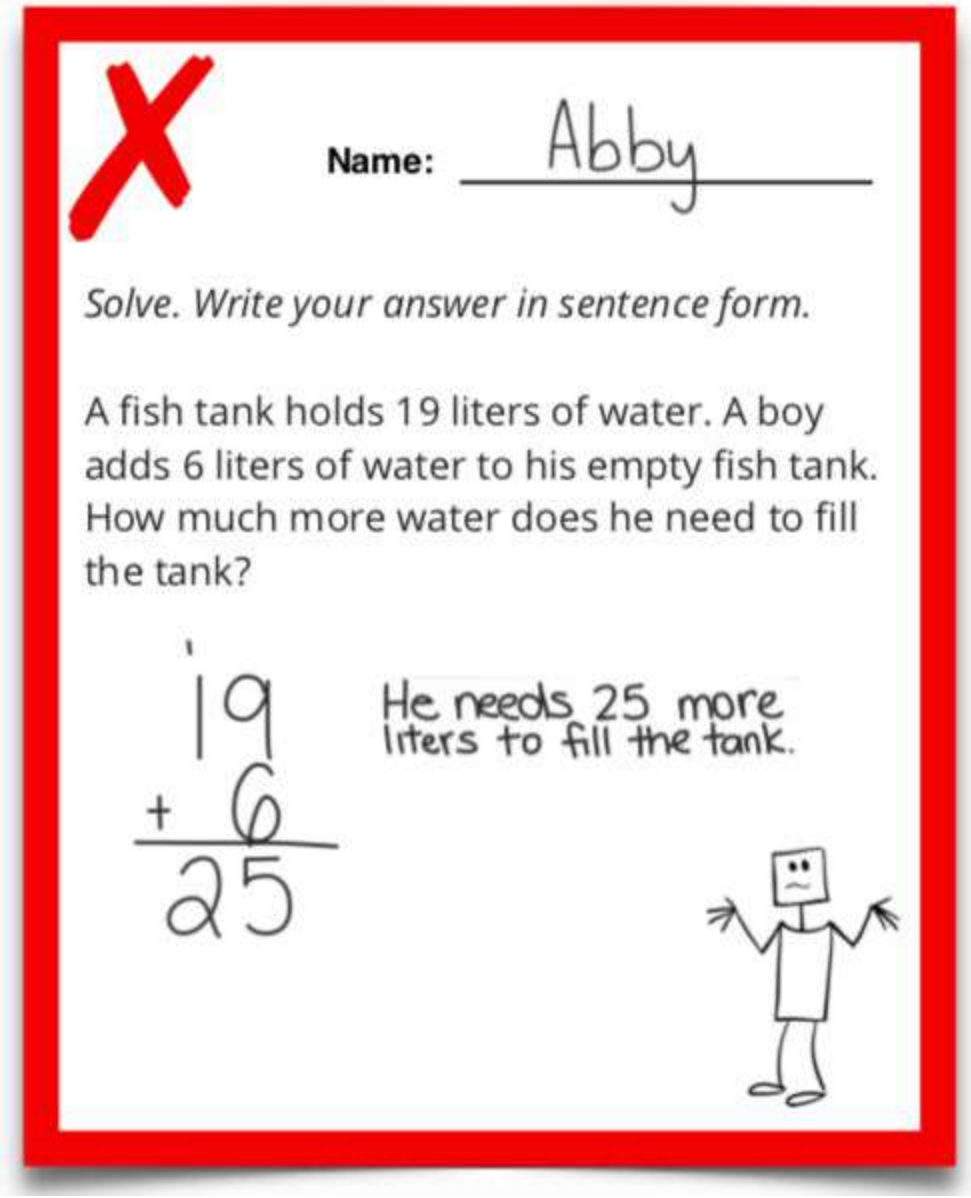
What place value should Debra have used to compare the two numbers?

Explain your reasoning.



Why was it incorrect for Sean to write an 11 in the ones column?

Explain how Sean should have regrouped 8 + 3.



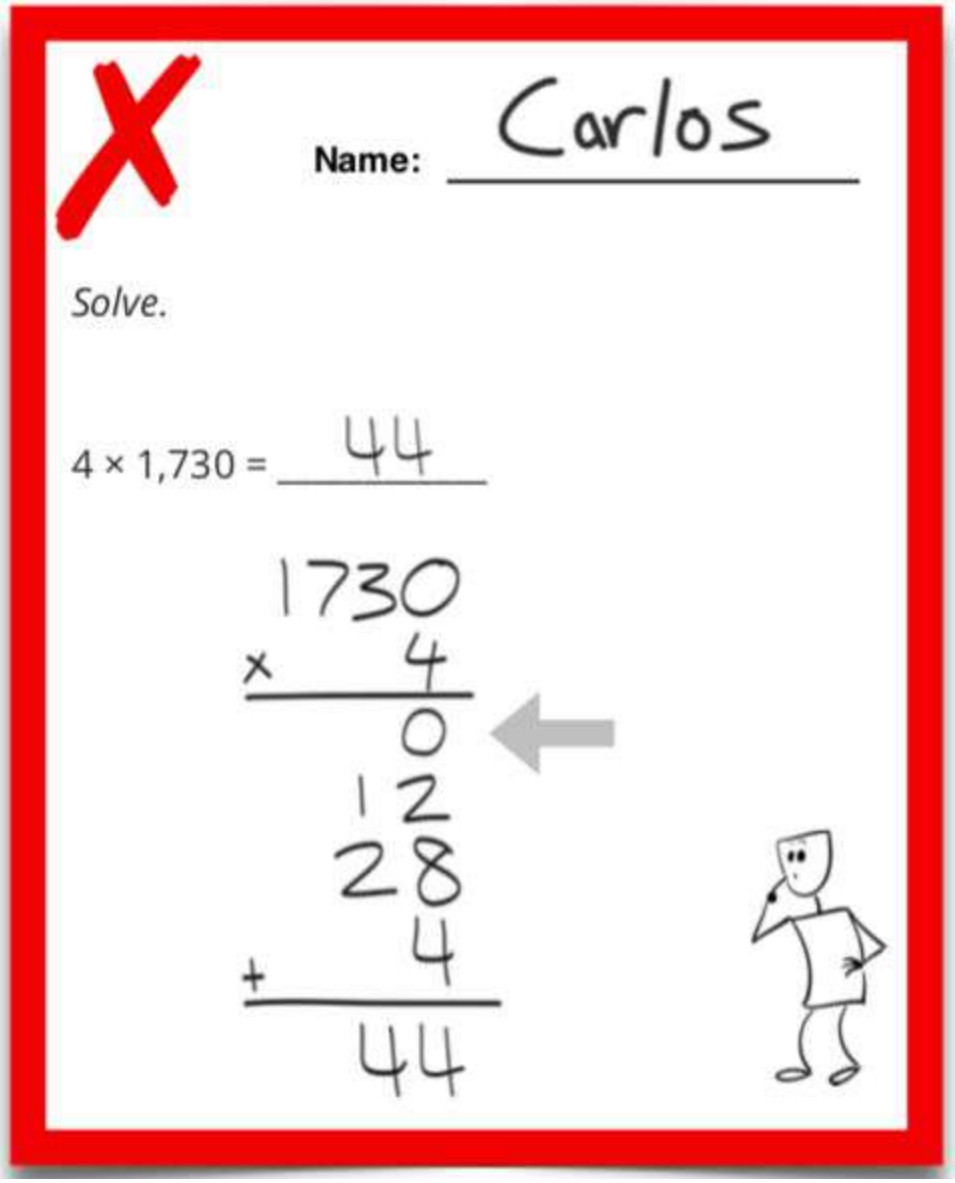
Name: Abby

Solve. Write your answer in sentence form.

A fish tank holds 19 liters of water. A boy adds 6 liters of water to his empty fish tank. How much more water does he need to fill the tank?

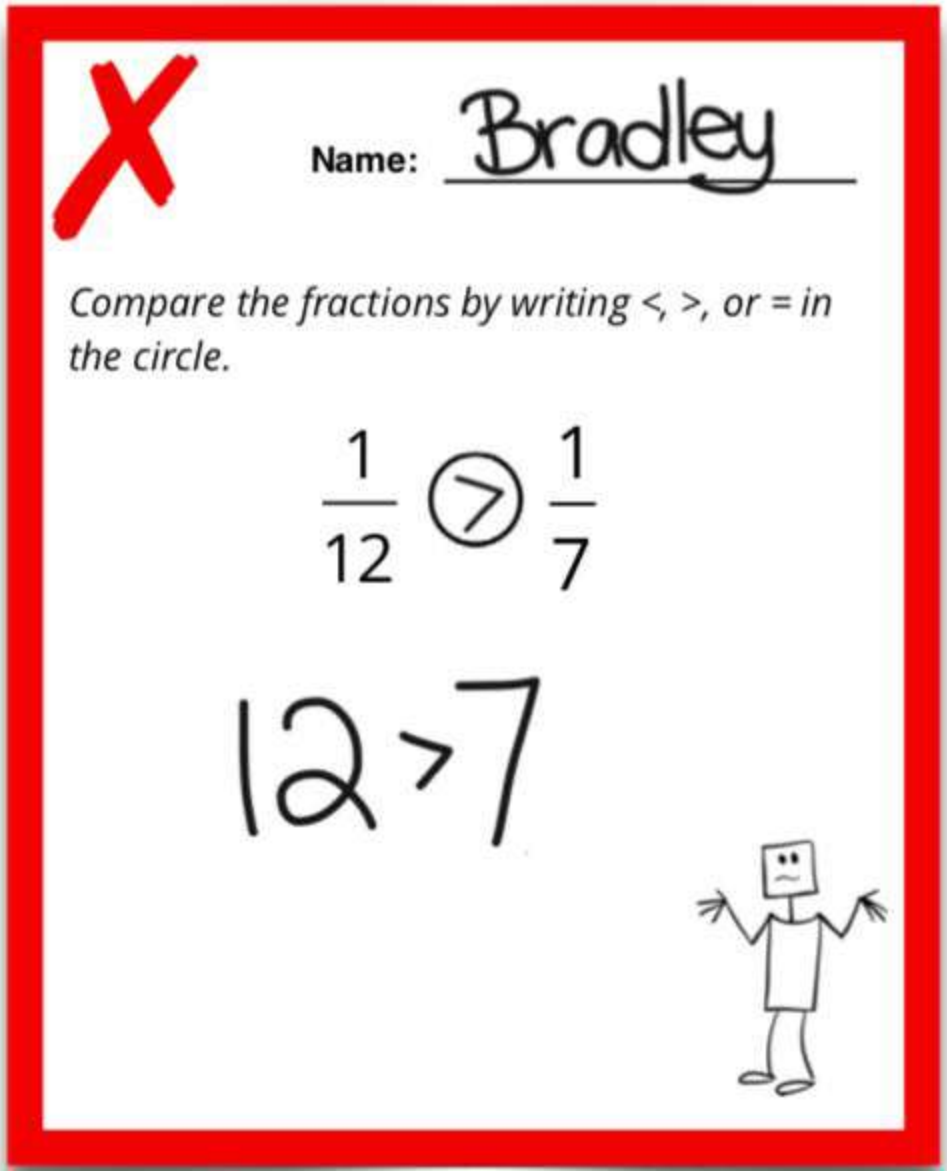
$$\begin{array}{r} {}^{1}19 \\ +\ 6 \\ \hline 25 \end{array}$$

He needs 25 more liters to fill the tank.



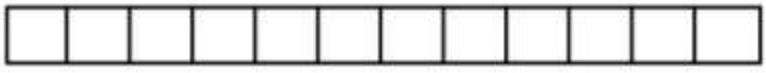
Carlos did not pay attention to place value when solving the problem, but the partial product marked with an arrow is correct. Explain why.

Explain why the other partial products are incorrect.



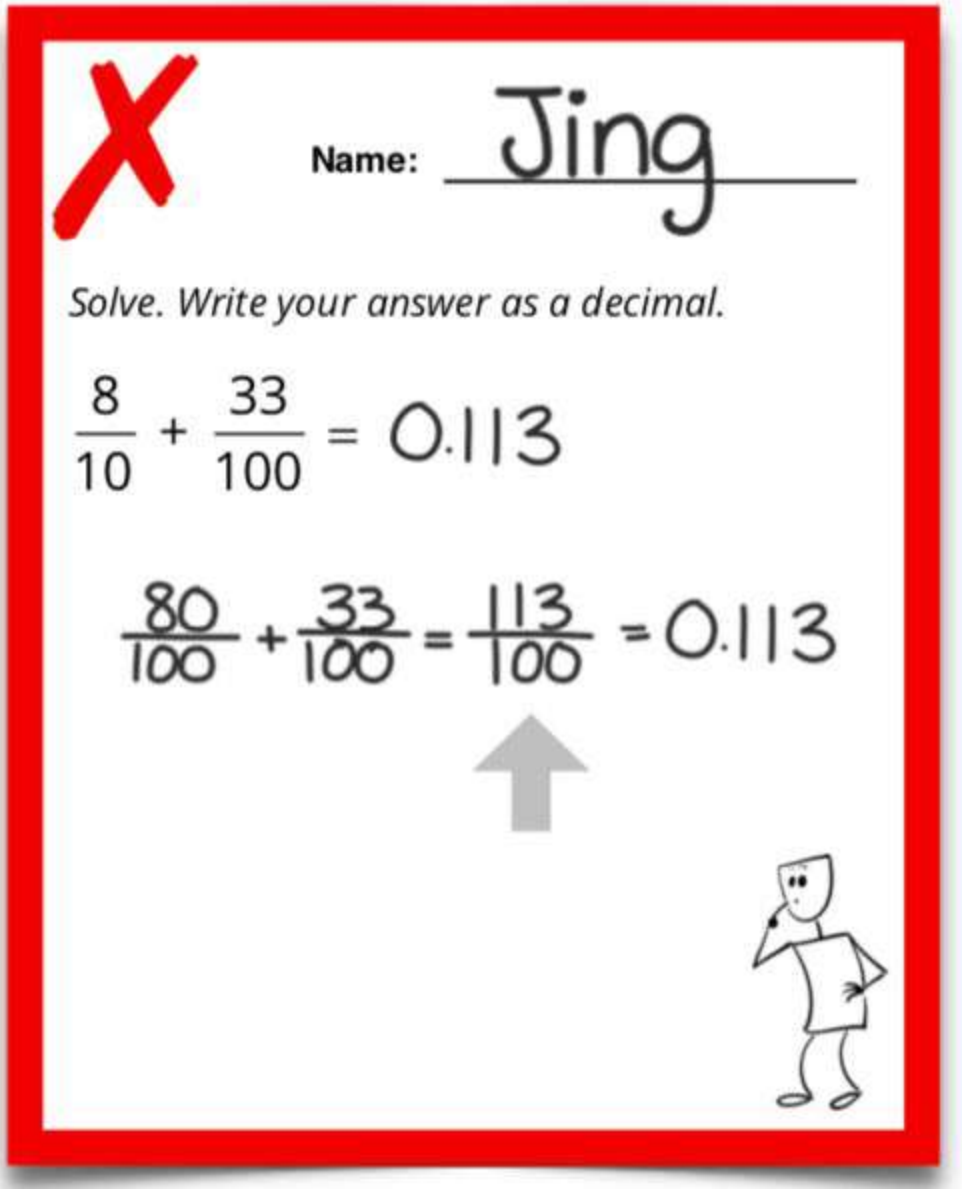
Bradley is correct to compare the denominators since the numerators are the same. However, he did not do it correctly. Help Bradley check his work by shading the diagrams below to represent each fraction.

Shade $\frac{1}{12}$.



Shade $\frac{1}{7}$.

Explain why $\frac{1}{12}$ is actually **less than** $\frac{1}{7}$.



Use the place value chart below to explain why Jing's answer is not equivalent to $\frac{113}{100}$.

Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths
		0	.	1	1	3

In the step marked with an arrow, look at the values of the numerator and the denominator. How could Jing have known the answer should be greater than 1?

Grade 4 Additional Math Activities

Wrong One

Two of these pictures are correct and one is incorrect. Identify which one is wrong and describe why it is wrong. Then describe what would need to be changed to make it correct.

(1) 

The cookie is cut into thirds.

(2) 

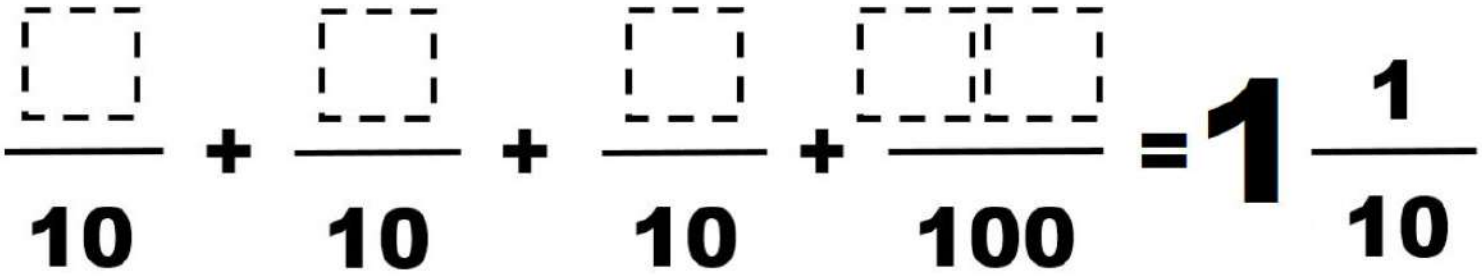
The cake is cut in half.

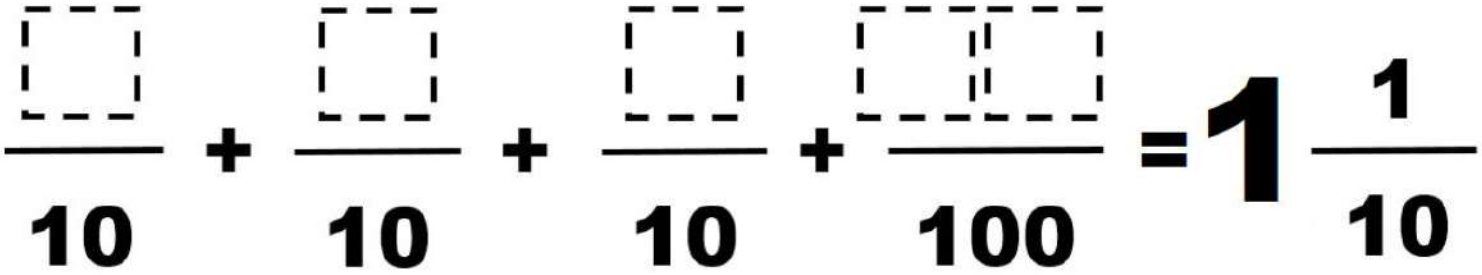
(3) 

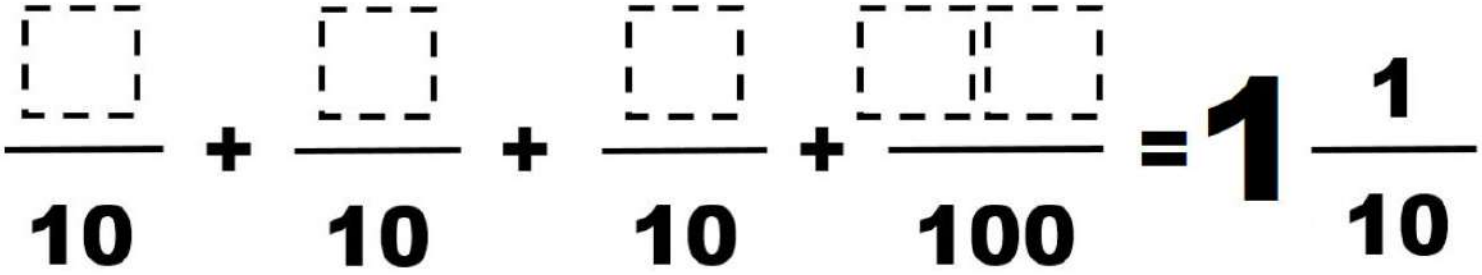
The pizza is cut into sixths.

Open Middle

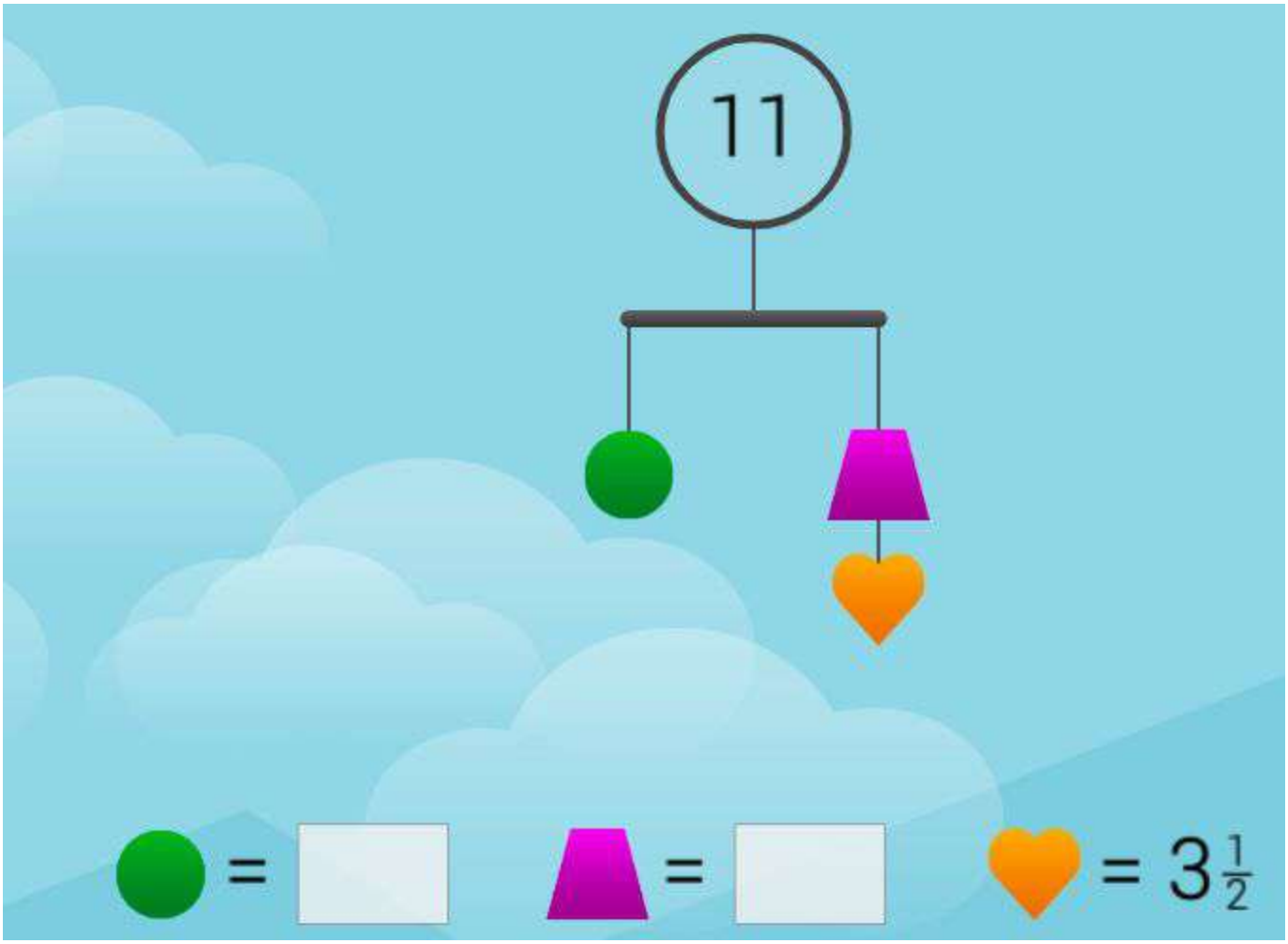
Using the digits 0 to 9, no more than one time each, to fill in the boxes to decompose 1 1/10. Try multiple times to different correct answers.





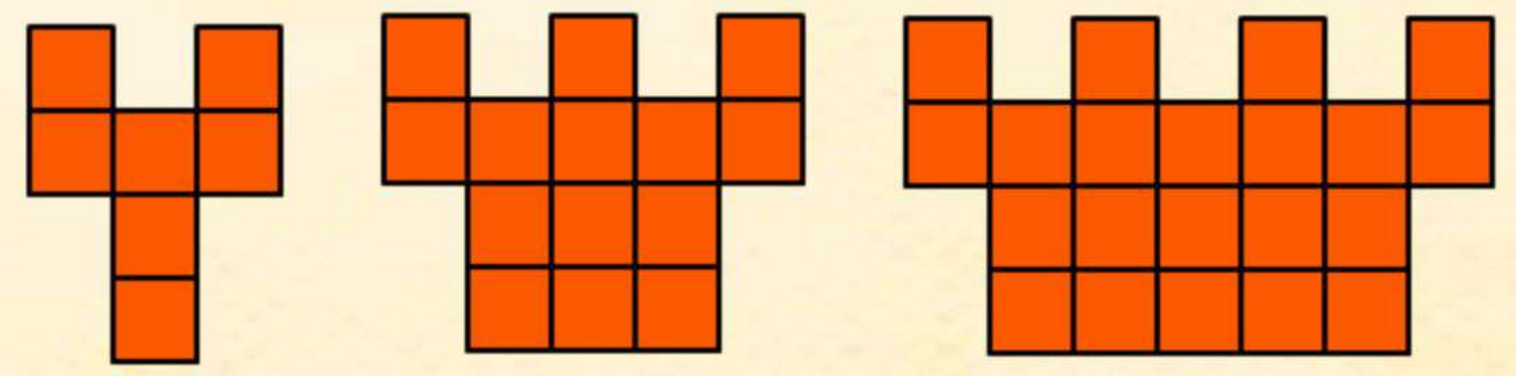


Number Balance



Both sides of the mobile must equal each other to make it balanced. If the total of both sides has a combined total value of eleven, what is the value of each circle and each trapezoid? (The heart value must be 3 ½).

Visual Patterns



Describe the above pattern in words.

_____

_____

_____

_____

The first three steps in the pattern are shown above. How many blocks would be in the 8th step if the pattern continued?

_____ Blocks

Explain how you know.

_____

_____

_____

_____

Multiplication Grids

Complete the Multiplication Grids below. The two numbers in each row and column must multiply together and equal the last number. See the example to the right.

9	5	45
2	6	12
18	30	

		18
		28
12	42	

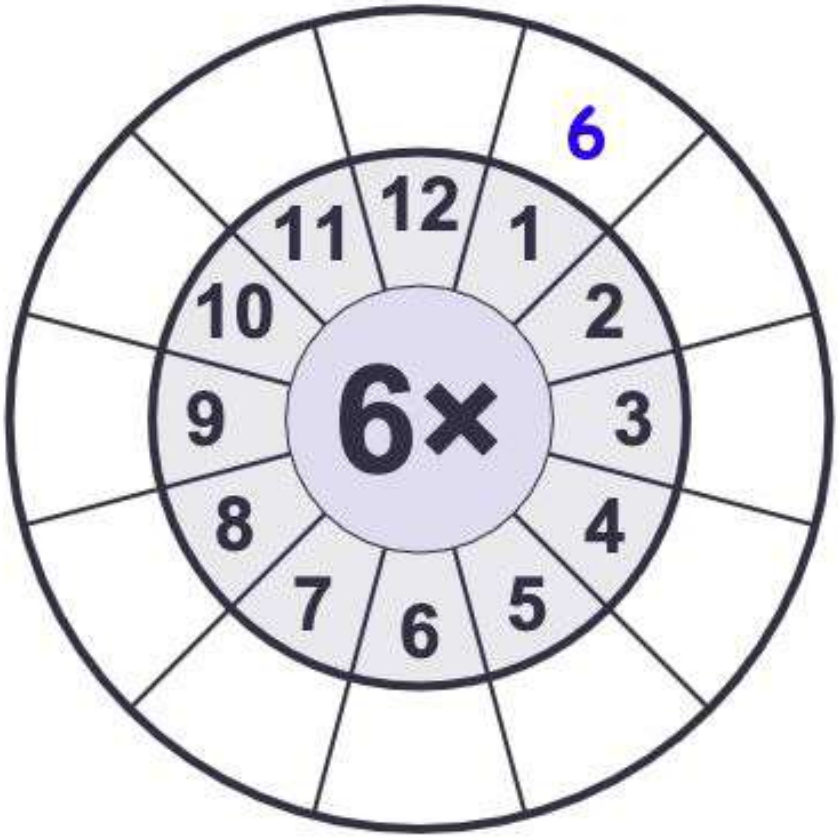
		36
		40
32	45	

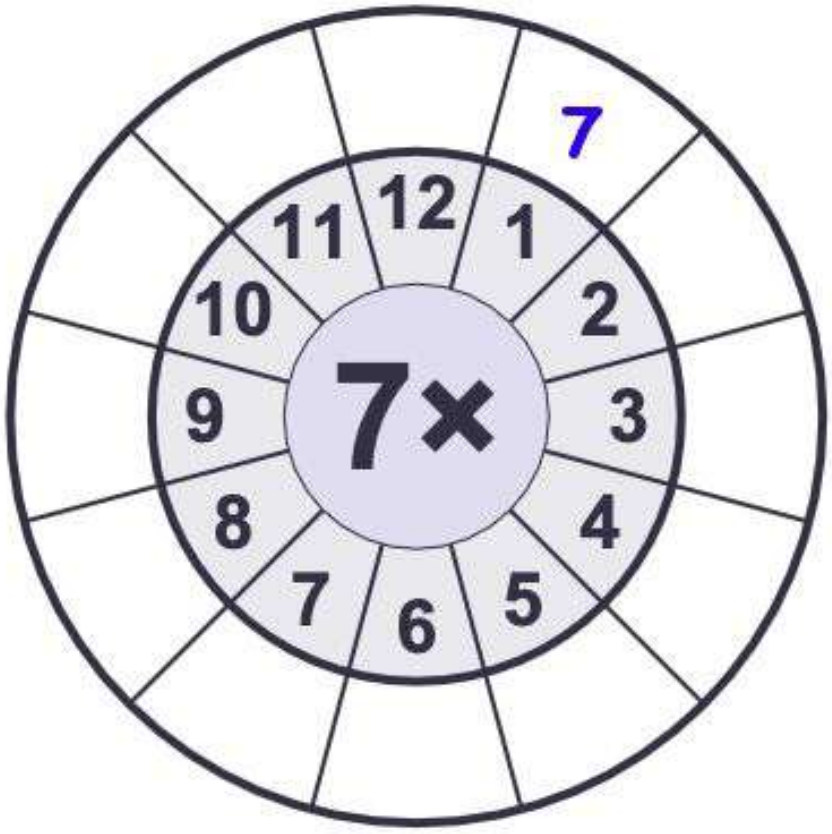
		63
		24
21	72	

		12
		48
24	24	

Multiplication Circles

Complete the following multiplication fact circles. (Remember you can count up or count on if you get stuck)





Visual Multiplication: **Complete the questions below. A column is up and down: a row is left and right. The first problem has been started for you.**

How Many Rows? 5

How Many Columns? 4

How Many Blocks? ____

Write the Problem: _____

How Many Rows? ____

How Many Columns? ____

How Many Blocks? ____

Write the Problem: _____

How Many Rows? ____

How Many Columns? ____

How Many Blocks? ____

Write the Problem: _____

How Many Rows? ____

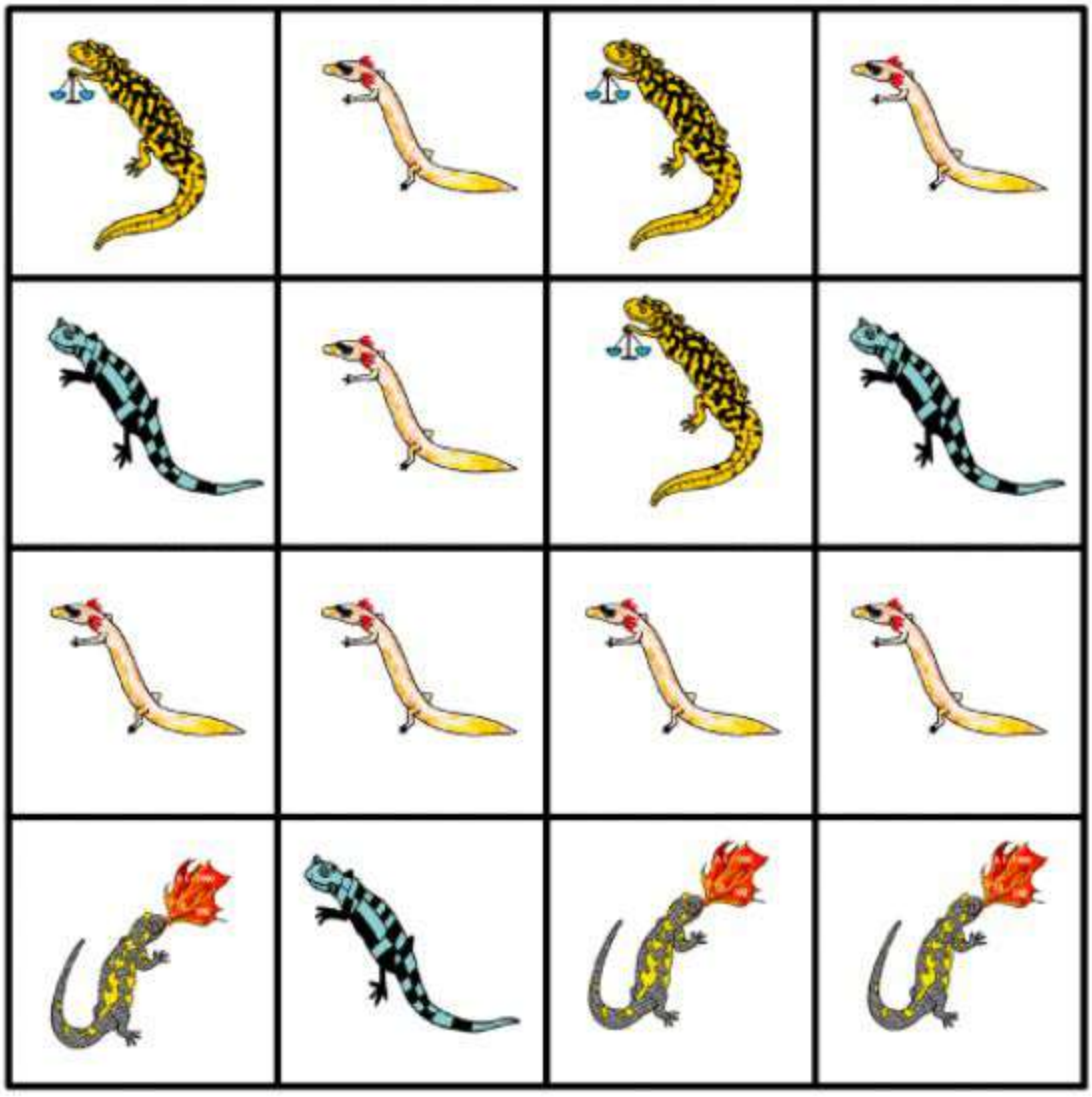
How Many Columns? ____

How Many Blocks? ____

Write the Problem: _____

Addition Math Puzzle

Find the value of each salamander. The total **SUM** of each horizontal line is listed at the right.



How much is each salamander worth?

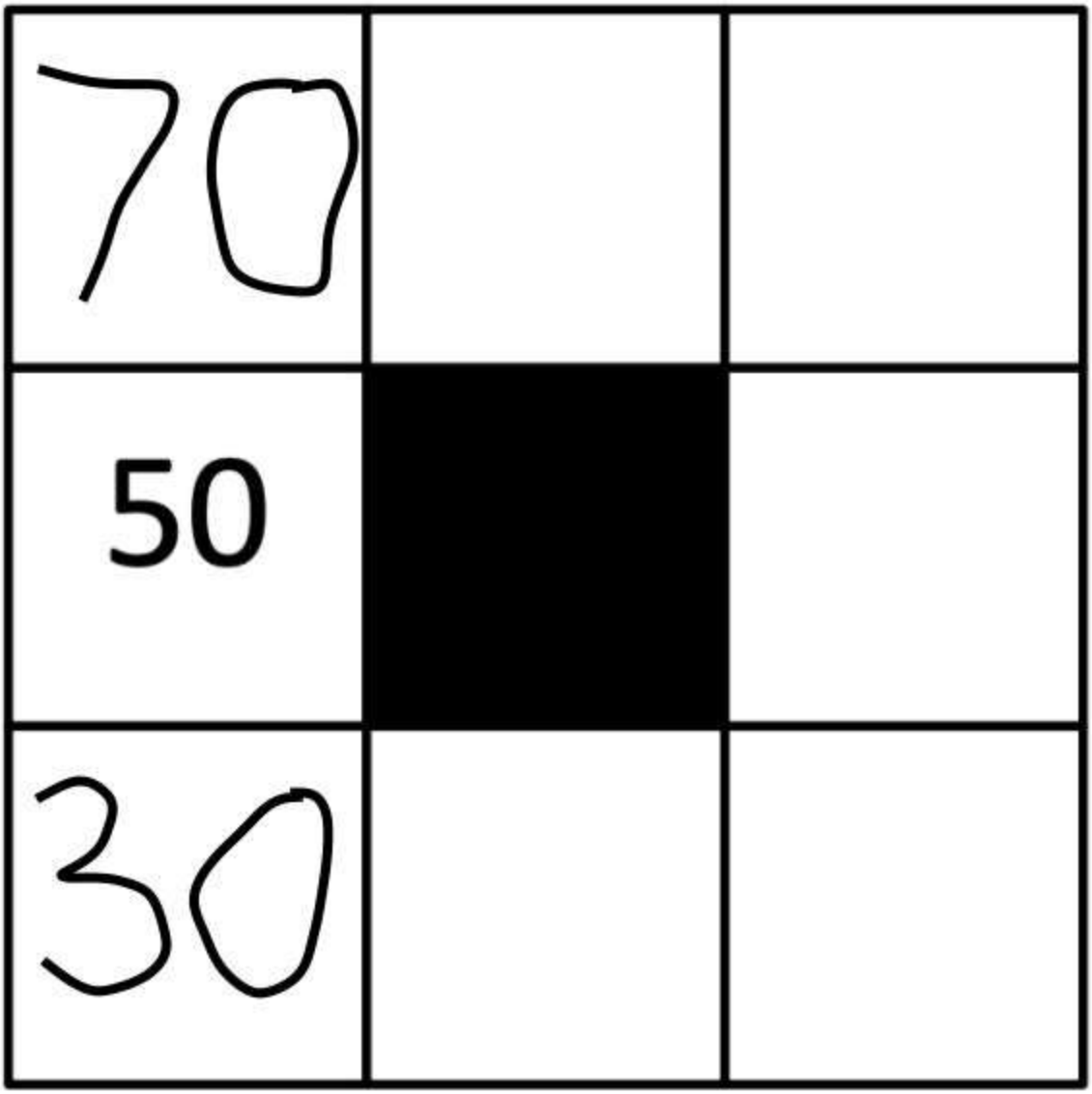
HINT: Start with the row of all the same salamanders!!!

Addition Number Puzzle

Write the numbers 10 20 30 40 50 60 70 80, so that each side of the square has a total of 150

Each number may only be used ONCE (So 30 50 and 70 can NOT be used again)

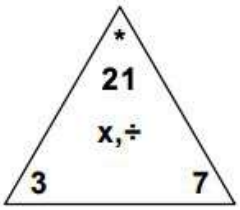
The left side has been started for you.



Math Fact Fluency Grade 4

What are Fact Triangles?

- **Fact triangles are a type of flash card that group together families of related arithmetic facts ("fact families") like the one shown here:**



What are "fact families"?

- **3 x 7 = 21 is related to 7 x 3 = 21 because multiplication is commutative (a x b = b x a).**
- **3 x 7 = 21 also is related to 21 ÷ 7 = 3 and 21 ÷ 3 = 7 because multiplication and division are inverse operations.**
- **So 3, 7, and 21 make up the following family of four facts:**

3 x 7 = 21
7 x 3 = 21
21 ÷ 7 = 3
21 ÷ 3 = 7

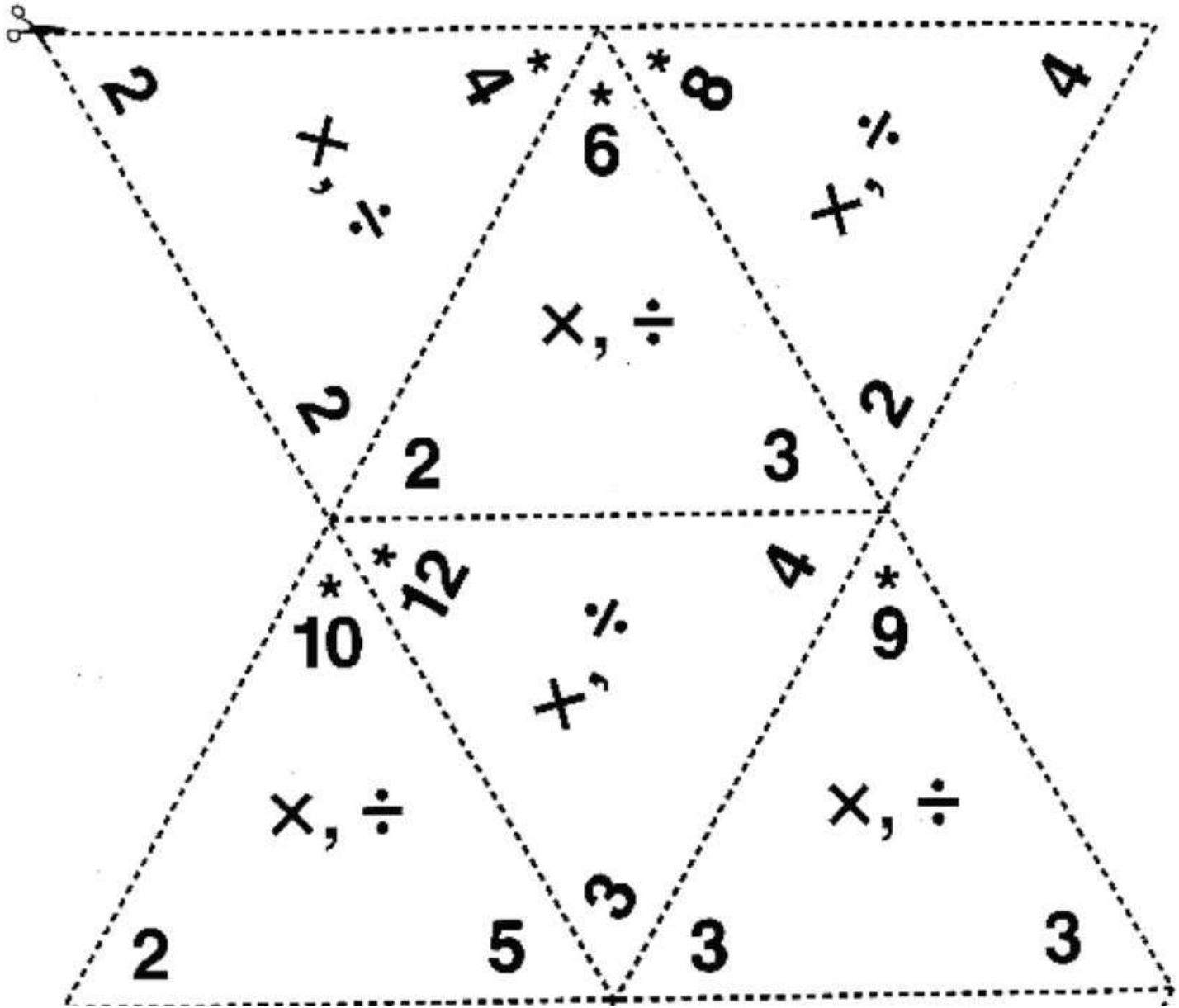
- **Learning basic arithmetic facts in families reinforces the relationship between facts and requires significantly less memorization of isolated facts!**

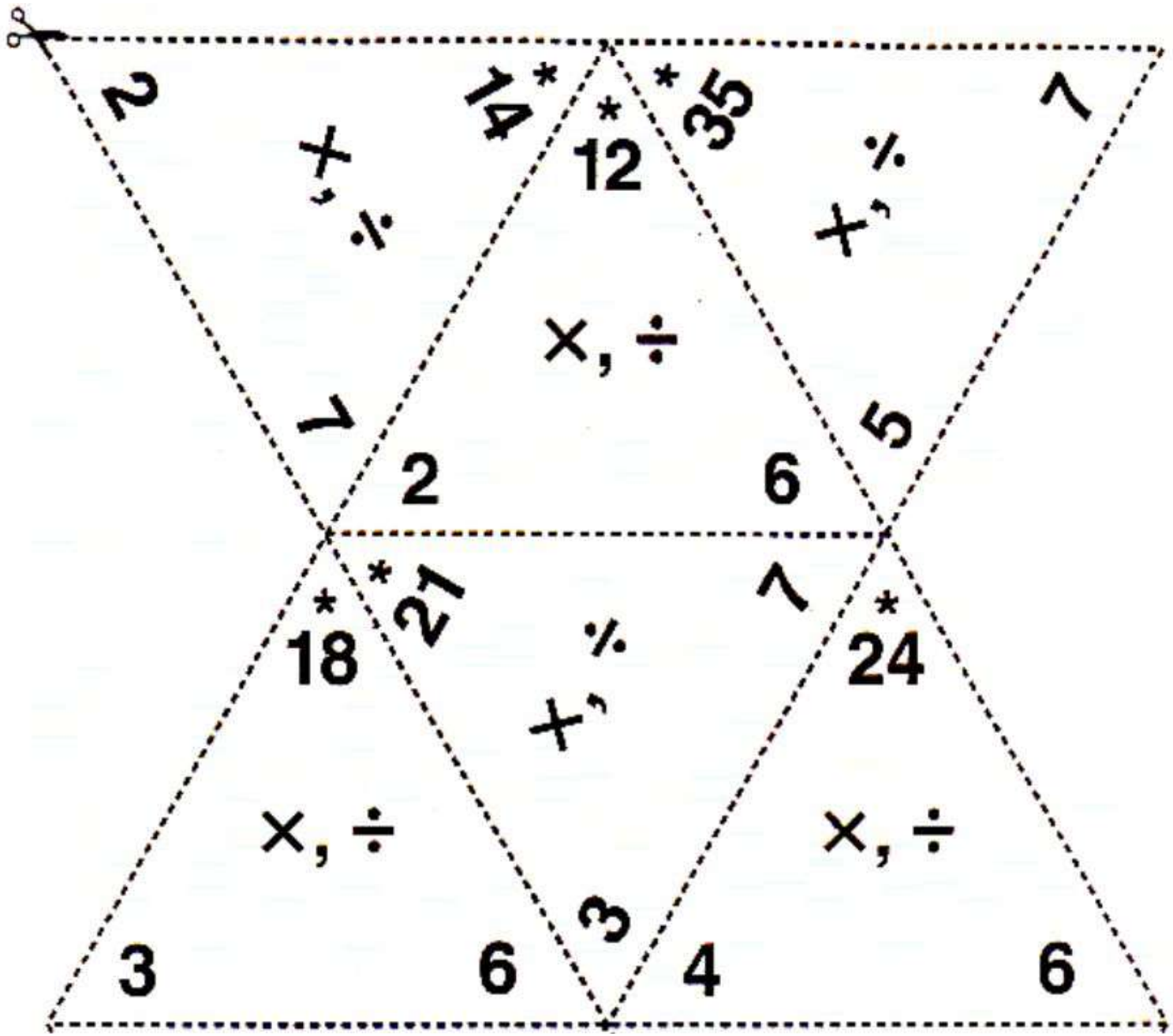
How might Fact Triangles be used to encourage thinking?

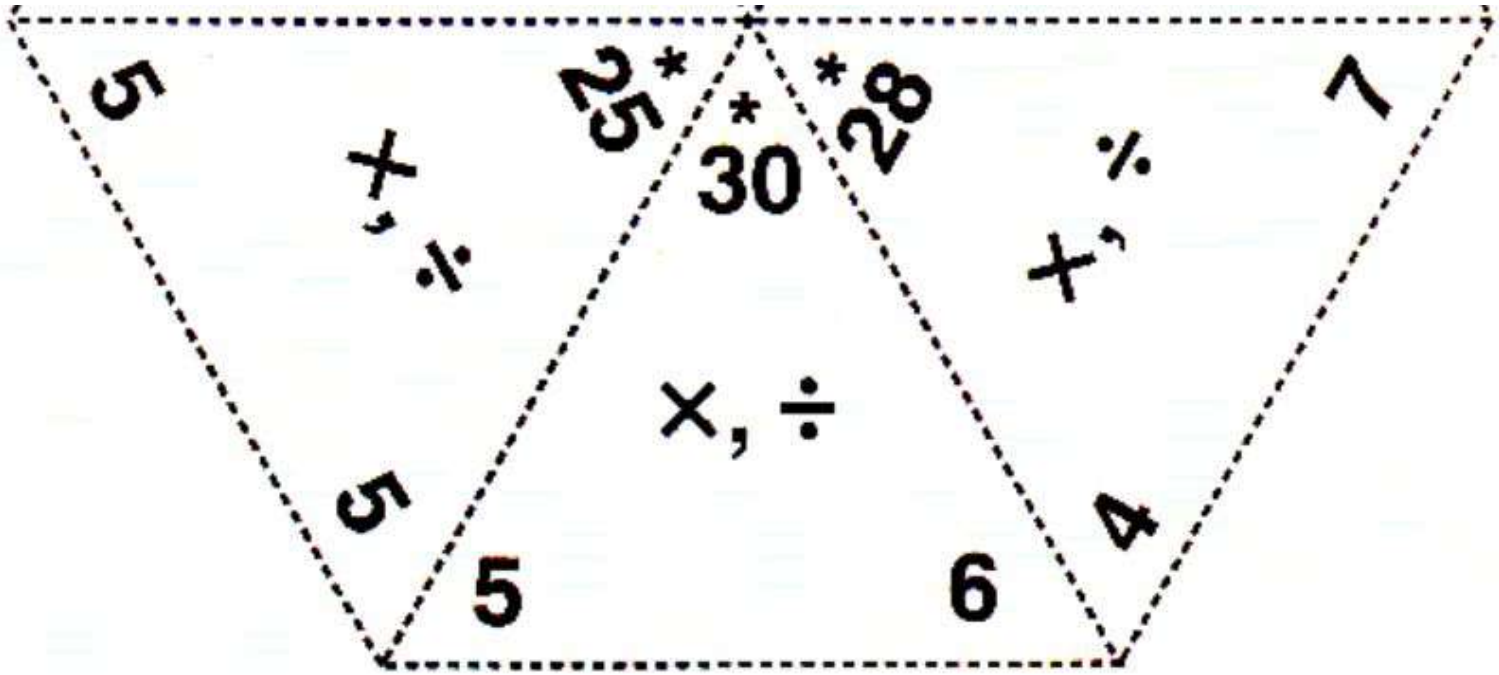
- **Before practicing facts, the student must first understand what multiplication and division represent and how they are related to each other.**
- **In each triangle, the product (21 in the triangle above) is marked with a star (*). After cutting out the individual triangles, have the student write the fact family on the back of each triangle.**
- **In partners, one person shows the front side of a triangle while covering one number. The other person must identify the missing number and the four facts in that fact family.**

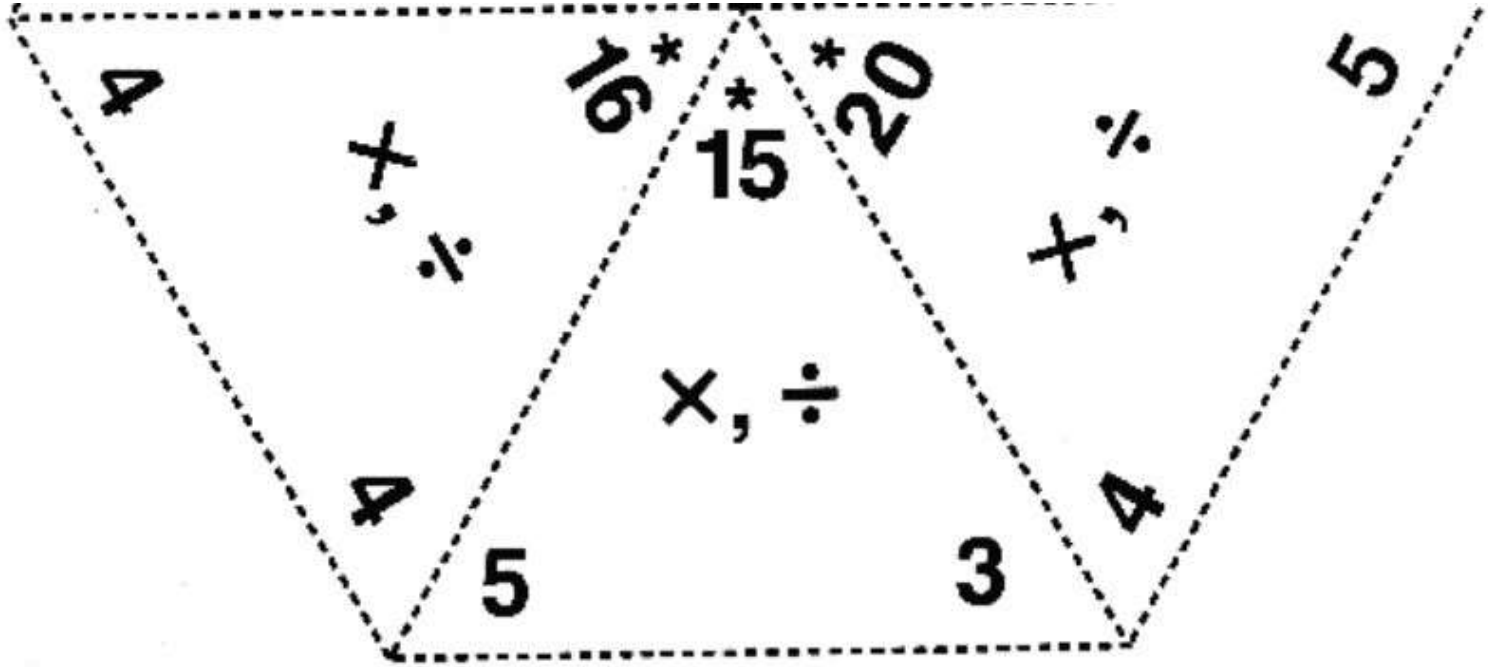
An example using the 3-7-21 card pictured above:

- ***Covering the starred number (21) requires the other person to find 3 x 7 or 7 x 3 and the related multiplication and division facts.***
- ***Covering the 3 requires the other period to find what number times 7 is 21 or 21 divided by 7 and the related multiplication and division facts.***


2
4*
*6
*8
4
x, ÷
x, ÷
x, ÷
2
2
3
2
*10
*12
4
*9
x, ÷
x, ÷
x, ÷
2
5
3
3
3


2
14*
*
12
*
35
7
x, ÷
x, ÷
x, ÷
1
2
6
5
x, ÷
*
18
*
21
7
*
24
x, ÷
x, ÷
x, ÷
3
3
6
4
6


5
52*
*
*28
7
30
×, ÷
×, ÷
×, ÷
5
5
4
5
6


4
16*
*
*20
5
15
×, ÷
×, ÷
×, ÷
4
4
5
3

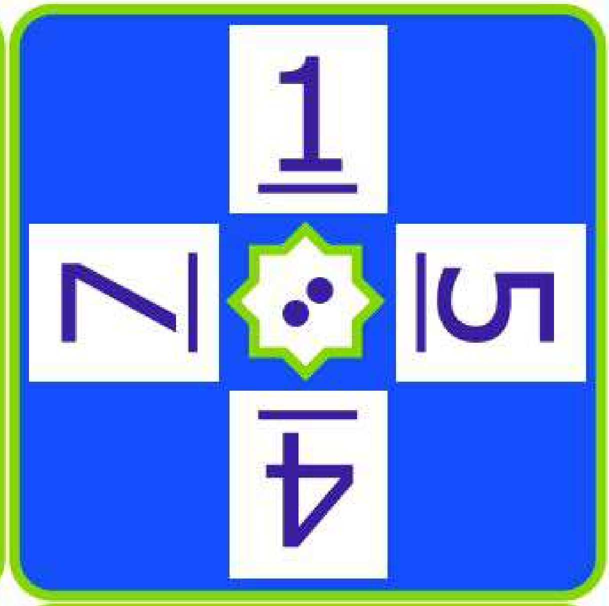
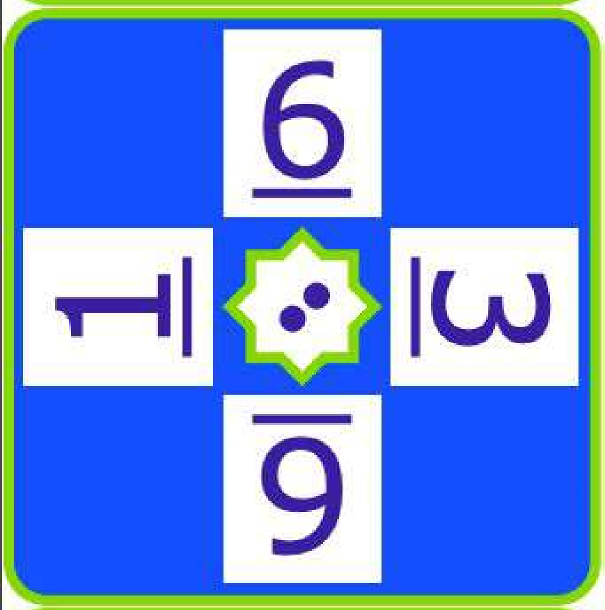
Math 24

Object of the game: Make the number 24 from the four numbers shown. You can add, subtract, multiply and divide. Use all four numbers on the card, but use each number only once. You do not have to use all four operations. All number nines have a red center, so you can tell a nine from a six. Can you solve the card below?

4 x 3 = 12

12 x 2 = 24

24 ÷ 1 = 24


2
4
2
7

1
7
5
4

6
1
3
6

3
4
3
5

2
7
2
6

5
8
4
6

	8	
8		3
	9	

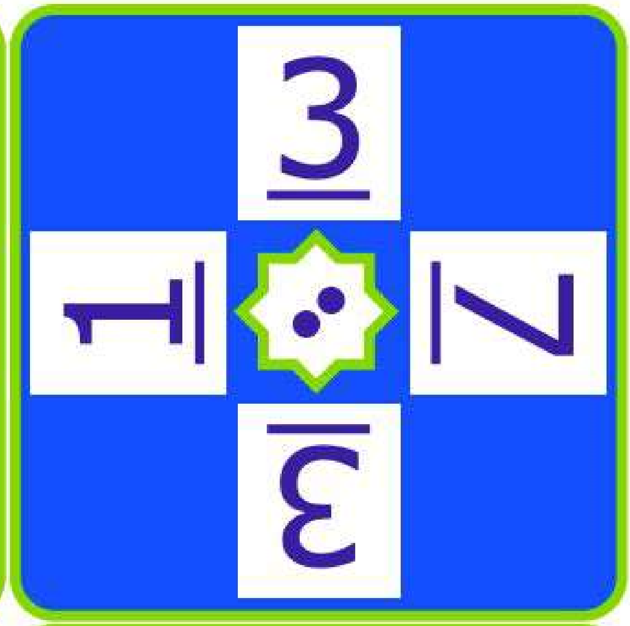
	4	
4		6
	2	

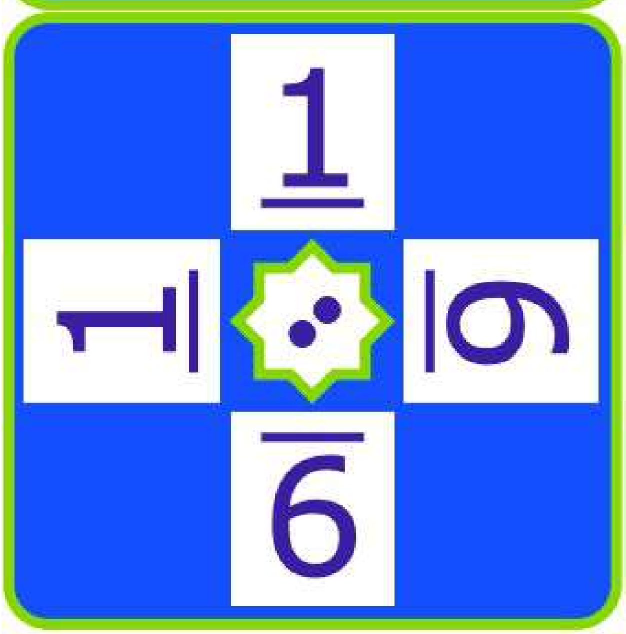
	7	
6		2
	8	

	1	
4		2
	9	

	8	
8		7
	9	

	5	
6		6
	8	


0 x 0 ----------	0 x 1 ----------	0 x 2 ----------	0 x 3 ----------	0 x 4 ----------
0 x 5 ----------	0 x 6 ----------	0 x 7 ----------	0 x 8 ----------	0 x 9 ----------

1 x 0 ---	1 x 1 ---	1 x 2 ---	1 x 3 ---	1 x 4 ---
1 x 5 ---	1 x 6 ---	1 x 7 ---	1 x 8 ---	1 x 9 ---

2 x 0 ---	2 x 1 ---	2 x 2 ---	2 x 3 ---	2 x 4 ---
2 x 5 ---	2 x 6 ---	2 x 7 ---	2 x 8 ---	2 x 9 ---

3 x 0 ---	3 x 1 ---	3 x 2 ---	3 x 3 ---	3 x 4 ---
3 x 5 ---	3 x 6 ---	3 x 7 ---	3 x 8 ---	3 x 9 ---

4 x 0 ---	4 x 1 ---	4 x 2 ---	4 x 3 ---	4 x 4 ---
4 x 5 ---	4 x 6 ---	4 x 7 ---	4 x 8 ---	4 x 9 ---

5 x 0 ---	5 x 1 ---	5 x 2 ---	5 x 3 ---	5 x 4 ---
5 x 5 ---	5 x 6 ---	5 x 7 ---	5 x 8 ---	5 x 9 ---

6 x 0 ---	6 x 1 ---	6 x 2 ---	6 x 3 ---	6 x 4 ---
6 x 5 ---	6 x 6 ---	6 x 7 ---	6 x 8 ---	6 x 9 ---

7 x 0 ---	7 x 1 ---	7 x 2 ---	7 x 3 ---	7 x 4 ---
7 x 5 ---	7 x 6 ---	7 x 7 ---	7 x 8 ---	7 x 9 ---

8 x 0 ----------	8 x 1 ----------	8 x 2 ----------	8 x 3 ----------	8 x 4 ----------
8 x 5 ----------	8 x 6 ----------	8 x 7 ----------	8 x 8 ----------	8 x 9 ----------

9 x 0 ----------	9 x 1 ----------	9 x 2 ----------	9 x 3 ----------	9 x 4 ----------
9 x 5 ----------	9 x 6 ----------	9 x 7 ----------	9 x 8 ----------	9 x 9 ----------

10 x 0 ---	10 x 1 ---	10 x 2 ---	10 x 3 ---	10 x 4 ---
10 x 5 ---	10 x 6 ---	10 x 7 ---	10 x 8 ---	10 x 9 ---

I Spy

Players 2

Materials: Deck of cards, face cards worth ten, Ace worth 1 or 11.

How to Play: Deal out the entire deck of cards in a 13 x 4 array. (Example shown not all cards)

Find two cards next to each other, vertically or horizontally, that add to make a number. "I spy two cards with a sum of 10". You can also play the game with multiplication, "I spy two cards with a product of 40".

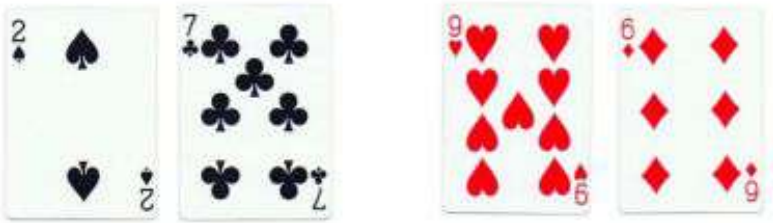
The other player looks for two cards that multiply to make the sum or product and removes them. After many turns, the array can be reformed to continue play.

Sort it

Players 2

Materials: Deck of cards

How to Play: Pick a way to sort the cards (color, suit, or numbers). Deal out the deck and players take turns finding cards that fit their sort. Look for creative ways to sort; even numbers, odd numbers, two cards with a sum of 10, etc.

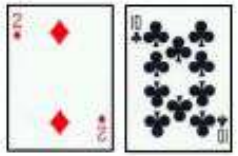


Addition Top-It

Players 2

Materials: Deck of cards, face cards worth ten, Ace worth 1 or 11.

How to Play: Each player turns over two cards and adds them together. The player with the greatest sum wins all the cards. Continue until all the cards are gone.



2 + 10 = 12

5 + 5 = 10

Player 1 wins all four cards.

Make the game easier by taking higher digit cards out of the deck. Make the game harder by add 3 cards.

Make it BIG

Players 2

Materials: Deck of cards with the 10s removed, Ace worth 1, scratch paper

How to Play: Draw a game board like the one shown. Deal 6 cards to each player. Try to create the largest number possible. Players must think carefully about where to place a card. **Once placed, a card cannot be moved.**

Trash Can

Each player flips over one card at a time and decides where to place it to form the largest number possible. All 6 cards must have a place!

is 98,574

The player with the largest number wins.

Hit the Target

Players 2

Materials: Deck of cards, face cards worth ten, Ace worth 1 or 11.

How to Play: Lay out five cards face up. Then choose one additional card to be the target number. You may add, subtract, multiply or divide to hit the target number. Try to use all five cards, but you must use at least 2 cards. Winner takes the cards in the equation, plus the target number.

Target number is 

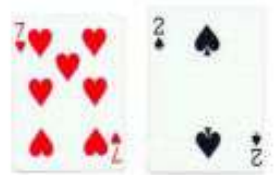
A player could choose: 5 – 2 or 8 – 5
or 10 – 5 – 2 or 5 x 2 – 7 Look for more ways!

Subtraction Top-It

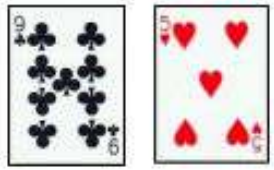
Players 2

Materials: Deck of cards, face cards worth ten, Ace worth 1 or 11.

How to Play: Each player turns over two cards and subtracts the smaller digit from the larger digit. The player with the smallest difference wins all the cards. Continue until all the cards are gone.



7 - 2 = 5



9 – 5 = 4

Player 2 wins all four cards.

Make the game easier by taking higher digit cards out of the deck. Make the game harder by playing with 2-digit - 1-digit subtraction.

Give Me 10

Players 2

Materials: Deck of cards, face cards removed, Ace worth one.

How to Play: Deal 10 cards face up.

Players take turns finding and removing combinations of cards that add up to 10.

Deal out cards so there are always 10 cards face up.

To make it challenging, find three cards that add up to a target number (3 numbers that add up to 20).

Multiplication Top-It

Players 2

Materials: Deck of cards, face cards worth ten, Ace worth 1 or 11.

How to Play: Each player turns over two cards and multiplies to get a product. The player with the largest product wins all the cards. Continue until all the cards are gone.

4 x 10 = 40

3 x 6 = 18

Player 1 wins all four cards.

Make the game easier by taking higher digit cards out of the deck. Make the game harder by playing with 2-digit x 1-digit multiplication.

1	2	3	4	5
6	7	8	9	10

1	2	3	4	5
6	7	8	9	10

1	2	3	4	5
6	7	8	9	10