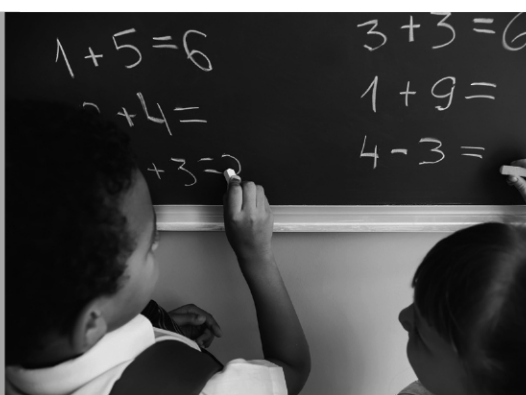


# Playing With Math



**Mini Fact:**  
“Eleven plus two” and “Twelve plus one” are anagrams of each other, and both are equal to 13!

Do you enjoy math? Some kids think it’s scary, but it really can be fun. Math becomes easier when you learn to break down problems into smaller pieces.

## Keep it simple

You don’t have to keep big numbers in your head. The main trick is to break down big numbers into simpler ones. When you do that, hard problems become easier.

For example, when you read, you probably break things down into simple parts without even thinking about it. When you sound out a word, for example, you are breaking it into different parts.

People who can solve one kind of problem are probably good at solving other kinds of problems. They’ve learned how to break things down into simple pieces. They can also see patterns and how things fit together.

## Use rhymes to remember

If you want to multiply by 5, how would you do it? What is 5 x 66?

An easy thing to do is to multiply 66 by 10 and then cut it in half. (Five is half of 10.) Half of 660 is 330.

In the book “The Grapes of Math,” author Greg Tang uses poems as an aid:

“A group of 5 you’ll find with ease.  
“Half of 10 is just a breeze.”

Now try multiplying by 9. Can you multiply 9 x 6? How about 9 x 89? Remember to break the problems into simpler parts.

Here’s Greg’s poem to help you:  
“A group of 9 requires tact.  
“Start with 10 and then subtract.” (10 - 1 = 9)

Try it! We’ll give you the answers first:  
 $9 \times 6 = 54$   
So ...  
 $10 \times 6 = 60$   
 $60 - 6 = 54$   
 $9 \times 89 = 801$   
So ...  
 $10 \times 89 = 890$   
 $890 - 89 = 801$

## Number tricks

Once you understand how numbers work, you can play all sorts of games with them.

For example, you can learn to multiply two-digit numbers by 11. Let’s start with:

What is the same about the middle number in each answer?

$$\begin{array}{r} 72 \\ \times 11 \\ \hline 792 \end{array}$$
$$\begin{array}{r} 81 \\ \times 11 \\ \hline 891 \end{array}$$
$$\begin{array}{r} 44 \\ \times 11 \\ \hline 484 \end{array}$$

In all these answers, we added together the two digits in the original number. (7 + 2 = 9, 8 + 1 = 9, 4 + 4 = 8) The sum is now in the middle of the multiplication answer.

You can also remember that when you are multiplying by 11, you are really multiplying by 10, then multiplying by 1. Then you add the answers together.

$$\begin{array}{r} 45 \\ \times 10 \\ \hline 450 \end{array} + \begin{array}{r} 45 \\ \times 1 \\ \hline 45 \end{array} = \begin{array}{r} 45 \\ \times 11 \\ \hline 495 \end{array}$$



## Learning to improvise

“The secret to being smart is taking something complicated and breaking it apart,” Greg Tang said. “It is knowing how to break things into the groups that make the most sense.”

He said doing math is like being a good cook. Once you learn the basics, you can start **improvising**, or trying new things.

Most good cooks don’t follow recipes exactly. They get creative. They might put extra walnuts in the chocolate chip cookies. Or they might add peanut butter pieces instead.

If you followed every recipe exactly, you might get bored. It’s the same with math. When you’re learning, you probably need to follow the formulas.

But once you get going, you can spot connections between different ideas. Solving a problem can be exciting!

## Resources



### On the Web:

- [bit.ly/MPmathtricks](https://bit.ly/MPmathtricks)

### At the library:

- “Do the Math! Challenging, Fun Math Puzzles for Kids” by Steven Clontz and Jessica Clontz

## Try ‘n’ Find

Words that remind us of solving problems are hidden in this puzzle. Some words are hidden backward or diagonally, and some letters are used twice. See if you can find:



ADD, ANSWER, CONNECTION, FORMULA, GAME, IMPROVISE, MATH, MULTIPLY, NUMBERS, PATTERNS, PROBLEM, RECIPE, RHYMES, SIMPLE, SMALL, SOLVE, SUM, TRICK.

X I C D R F S O L V E N M R M  
K X M C O N N E C T I O N H N  
S M E L B O R P D A B A Q Y N  
E L J F H K G M A L N D H M U  
P J S I M P L E F L D S A E M  
I M V M T R I C K A U I W S B  
C B U X P G A M E M K M R E E  
E S N R E T T A P S R A R X R  
R I M P R O V I S E D T O O S  
Y U C M U L T I P L Y H N Q F

## Cook’s Corner

### Mac ‘n’ Cheese Croquettes

#### You’ll need:

- Cooking spray
- 4 cups prepared macaroni and cheese, chilled
- 2 large egg whites

#### What to do:

1. Preheat oven to 350 degrees. Coat large baking sheet with cooking spray.
2. Using wet hands, form chilled mac ‘n’ cheese into 4 equal patties about 1 inch thick.
3. Place egg whites in shallow dish. Mix panko and Parmesan in another shallow dish.
4. Dip patties into panko mixture and turn to coat. Dip into egg whites, turn to coat, and repeat in panko mixture.
5. Transfer croquettes to baking sheet and bake for 15 minutes or until golden brown.
6. Heat pasta sauce and use for dipping or drizzle over croquettes. Serves 4.

Adapted from “The Robin Takes 5 Cookbook for Busy Families” with permission from Andrews McMeel Publishing ([andrewsmcmeel.com](https://andrewsmcmeel.com)).



\* You’ll need an adult’s help with this recipe.

## ROOTONYM®

by Jan & Carey Orr Cook

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Study the definition. When you know the missing word, fill in the letter boxes and the sentence blanks.

Answers: Number, Answer, Square, Explain.

1. A total of people or things taken together; amount (6-letter noun)

□ □ □ □ □ □

2. A spoken or written reply to a question (6-letter noun)

□ □ □ □ □ □

3. A figure with four equal sides and four right angles (6-letter noun)

□ □ □ □ □ □

4. To make clear or plain; to give reasons for (7-letter verb)

□ □ □ □ □ □ □

1. Julie counted the \_\_\_\_\_ of students in her class.
2. Marcia knows the correct \_\_\_\_\_ when adding 2 + 2.
3. Bob figured out how many triangles were in a \_\_\_\_\_.
4. Clara’s teacher can clearly \_\_\_\_\_ the math homework.

## Mini Jokes



**Manny:** What did the magician who liked math do for fun?

**Mary Catherine:** Arithmetricks!

## Eco Note



Falling rabbit populations across the United Kingdom have prompted the National Heritage organization to ask landowners to create rabbit “hotels” to help the bunnies survive. A new viral disease caused rabbit numbers to decrease by 43% across all of Britain between 2008 and 2018. The Shifting Sands project asks people to arrange piles of branches around rabbit warrens to provide safety from predators and to create new sites for females to give birth.

adapted with permission from Earthweek.com

## For later:

Look in your newspaper for numbers you can try new tricks with.

**Teachers:** Follow and interact with The Mini Page on Facebook!



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