



First Name: _____ Last Name: _____ Grade: _____

Teacher: _____ Parent's email: _____




One through Twelve

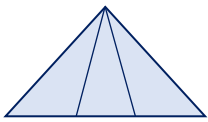



Welcome to the Math Challenge #1. Counting is the first step on our mathematical journey. Counting is also the first mathematical pattern learners encounter. Learning to add comes as an extension of counting. From counting, learners soon begin to count backwards which is a step towards subtractions, and they will also count in twos, fives, and tens (foundation for multiplication). In this first challenge, we will focus on problems involving numbers one through twelve. Easy? Let's try solving some, or all of them.



If you are new to any of the problem solving strategies, check out our complete overview of elementary problem solving strategies at <https://www.mathinaction.org/problem-solving-strategies.html>.

Kinder & First Grade: solve at least 3 problems.
Second & Third Grade: solve at least 7 problems.
Fourth Grade and above: solve at least 12 problems.

Answer

1.	Cindy found 3 pennies and 2 quarters under the sofa cushion. She also found 2 dimes and a nickel under the table. How many coins did she find in total?	
2.	 In the story <i>Make Way for Ducklings</i> , when the ducks are crossing the road, one of the pictures shows all of the ducklings have crossed the street, except for one. If there are 8 ducklings altogether, and one is left behind, how many ducklings crossed the street safely?	
3.	Jennifer brought three graham crackers to school. Peter and Riana also brought three graham crackers each to school. How many graham crackers did they bring in all?	
4.	The mother pig at the farm had 12 babies. They are going to be divided into two separate pens. If each pen will have 3 or more babies in it, how many different ways could the piglets be placed into the two pens? Note: 3 and 9 or 9 and 3 count as one way.	
5.	 Sarah finds 5 pinecones and Jeremy finds 3 pinecones in the park. If they want to collect 12 pinecones, how many more pinecones do they need?	
6.	There were some jellybeans in a jar. Boris ate 5 jellybeans. Caitlin and Desmond each ate two jellybeans. Now, there are only 3 jellybeans left. How many Jellybeans were in the jar? Hint: Work backward	

7.	Calista and Joel each earned 5 stars. Miraya earned 2 stars. Tom earned half of the total stars earned by Calista, Joel, and Miraya. How many stars did Tom earn?		
8.	Look at the figure below. A triangle is divided into 3 triangles. How many triangles (of any size) are there in the figure?		
9.	 Josiah's mom made 12 cupcakes for Myra's birthday. She arranged the 12 cupcakes in rows and columns to form an array. How many different arrangements of cupcakes could she have made? Note: count 1 by 12 and 12 by 1 as two different arrays.		
10.	Mrs. Goo has two daughters. The sum of the daughters' ages is 12. One daughter is 6 years older than the other. How old is Mrs. Goo's oldest daughter? Hint: Draw a diagram		
11.	Anshu was given 4 number cards as shown below. He had to form all possible 3-digit odd numbers using the number cards given. In every 3-digit odd number, each card could only be used at most once. How many possible ways could he form with the given number cards? Hint: Make an organized list.		
12.	a. Mrs. Smith has 3 children. The sum of their ages is the same as the product. How old are they? b. Mr. Wheeler has four children. The sum of their ages is the same as the product. How old are they? c. Mrs. Carlsberg has 6 children. The sum of their ages is the same as the product. How old are they?	a.	
13.	Amelia packs 4 t-shirts and 2 pairs of jeans for her weekend getaway. How many different outfit can she have if an outfit consists of one shirt and one pair of jeans? Hint: Make a list or a diagram.		

<p>14. It's time for Reya to pack for her one-week vacation. She loves to read. Reya has 6 books to choose from and will pack only two books because of the limited space she has in her bag. How many different ways can she do this? Hint: Make an organized list.</p>		
<p>15. What is the total number of possible outcomes when 2 pairs of coins are tossed?</p>		
<p>16. Find the number of ways in which 5 people Anika, Ben, Candice, Dasha, and Elon can be seated at a round table, such that Anika and Ben always sit together. Hint: Draw it out.</p>		
<p>17. An ice cream store offers only 1 type of cone and six different flavors (vanilla, strawberry, chocolate, coconut, caramel, and pumpkin spice). How many different two scoops ice-cream cones, where the scoops are side by side, can be made if having two scoops of the same flavor is allowed? Hint: Make an organized list or draw a picture. Note: chocolate-vanilla is the same as vanilla-chocolate</p>		
<p>18. How many ways are there to arrange the letters of the 5 letter word QUEUE without any duplicate arrangements?</p>		

Solution is available on October 8, 2021
www.mathinaction.org