

# Math Challenge #6


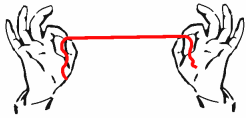





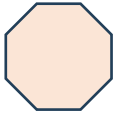
First Name: _____	Last Name: _____	Grade: _____
Teacher: _____	Parent's email: _____	

## Draw it out!

Welcome to Math Challenge #6. Most problems in this challenge can be solved by drawing a picture/diagram/model. Having the problems laid out visually will help you come up with the correct solutions. 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.**

	<i>Answer</i>
1. Yuki lives in an apartment building. There are exactly 2 floors above her and 2 floors below her. How many floors are there in the building?	
2. Quentin lines up three crayons, as seen to the right, such that each one is 3 inches apart from the crayon next to it. What is the length measured from the first crayon to the last crayon? <div style="text-align: center; margin-top: 10px;">  </div>	
3. Cameron, Holly, and Mariyah each drew two snowmen. Cameron and Holly added a hat on each of their snowmen. Mariyah did not. How many of the snowmen had hats?	
4. There were 9 red balloons and 7 blue balloons to give away. Some kids came by and got their balloons. Now there are only 3 blue balloons left. How many balloons were given away?	
5. Deana had a string that was 15 inches long. She cut the string into equal pieces of 5 inches in length. How many cuts did she make? <div style="text-align: center; margin-top: 10px;">  </div>	
6. Sulaiman made brownies in a rectangular pan. He cut the brownies into 3 rows with 6 brownies in each row. How many brownies are not touching the edge of the pan? <div style="text-align: center; margin-top: 10px;">  </div>	
7. A cookie jar was placed on a high shelf and Amina was trying to get it. She grabbed a step stool and tried to reach the jar, but she still could not reach the jar. She then placed a large and thick dictionary on top of the step stool before stepping on them to reach the jar. Standing on the step stool and the dictionary, Amina is 66 inches tall. If her height is 52 inches, and the book is two inches thick, how tall is the step stool in inches? <div style="text-align: center; margin-top: 10px;">  </div>	

8.	There are six children in the art class. Today, each child is given two sets of colored pencils, and each set contains six different colors. How many colored pencils are given to all six children together?	
9.	Kyle is 3 years older than his twin sisters, Lucia and Maya. If you add all of their ages together, the sum is 21. How old is Kyle?	
10.	 <p>Oktavia the Octopus decides to shake arms with herself. How many times can Oktavia shake arms with herself with no repeats?</p>	
11.	<p>A fireman stood on the middle step of a ladder, pouring water on a burning building.</p> <ul style="list-style-type: none"> <li>• As the smoke cleared, he stepped up three steps.</li> <li>• A sudden flare-up forced him to go down five steps.</li> <li>• He later climbed seven steps and worked until the fire was out.</li> <li>• At that point, he climbed up the last six steps and entered the building.</li> </ul> <p>How many steps were on the ladder?</p>	
12.	Mrs. Chan baked 9 trays of cookies. There were 20 cookies in each tray. She gave $\frac{1}{5}$ of the cookies to her neighbor and $\frac{4}{9}$ of the remainder to the local church. She then packed the rest of the cookies equally into 5 packets. How many cookies were there in each packet?	
13.	 <p>A piece of wire 8.5 feet long is bent to form a regular octagon. What is the length, in inches, of each side?</p>	
14.	There are 12 flags placed evenly spaced on a straight racetrack. The first flag is at the start line, and the last flag is at the finish line. If the distance between each adjacent flag is 15 yards, how long, in yards, is the track?	
15.	Mr. Mahendran ate exactly 100 grapes in 5 days. Each day he ate 6 more than the day before. How many grapes did he eat on the first day?	

16. The sum of two decimals is 20. The difference between these two decimals is 7. What is the product of these two decimals?	
17. Two-fifths of the Redwood Elementary's students went to the National Museum of American History for a field trip. One-fifth of all the students went to the zoo for a field trip. Half of the remaining students (that didn't go to the museum or zoo) went to a farm. Only 60 students didn't go on any field trip and stayed at school. How many students are there in this school?	
18. Alex and his two brothers bought a gaming console for their younger brother. The console was on sale for 25% off the original price. They paid a total of \$330, which included the 10% sales tax. What was the original price of the gaming console, without tax?	

*Solution is available on December 13, 2024*  
[www.mathinaction.org](http://www.mathinaction.org)