

# Math Challenge #7



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

## Draw a model

Welcome to the Math Challenge #7. Most of the problems in this challenge can be solved by the 'drawing a model' strategy. This strategy provides a concrete, visual representation to help us better understand the problem.

**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.	Donovan has 9 sparkly rocks in his collection. Josh gave him 3 more sparkly rocks. How many sparkly rocks does Donovan have?	
2.	 <p>There are 12 donut erasers in the jar. Three of them have pink icing, and four of them have brown icing. The rest have white icing. Dana took out all the ones with pink icing and white icing. How many donut erasers did she take?</p>	
3.	 <p>Richard brought a bag of mini-chocolates to give away to his teammates at his chess club. He gave two pieces to each of his teammate and had one piece of mini chocolate leftover for himself. If he had 7 teammates, how many mini-chocolates were there in the bag?</p>	
4.	Rianna baked some cookies. She ate one and split the rest into two plates. Each plate has 6 cookies. How many cookies did she bake?	
5.	Thomas collected coins for his class project. He had 16 coins from his piggy bank, 12 coins from his father's change jar, and he also found 2 coins under the sofa. The next day, Thomas got 3 coins from his mom. How many total coins did Thomas collect in all?	
6.	Bianca spent half of her weekly allowance on a new binder. It cost her \$16. She also bought a bag of candies for \$3. She saved the rest. How much did she save?	

7.	<p>A cookie jar was placed on a high shelf and Chandler was trying to get it. He grabbed a step stool and tried to reach the jar. He still could not reach the jar, so he placed a thick large book on top of the step stool before stepping on them to reach the jar. Standing on the step stool and the thick book, he is 54 inches tall. If his height is 38 inches, and the book was two inches thick, how tall is the step stool in inches?</p>		
8.	<p>Sofia spent a total of \$100 on a jacket and a hat. The jacket cost \$62 more than the hat. Find the price that Sofia paid for the jacket.</p>		
9.	<p>Rondha baked 63 cookies. <math>\frac{3}{7}</math> of them were chocolate chip cookies and the rest were sugar cookies. How many sugar cookies did Rondha bake?</p>		
10.	<p>Dylan prepared three types of drinks for a party. There were 4 times as much orange juice as apple juice, and there were 1800 ml of lemonade. If the total of the three drinks is 6300 ml, how much orange juice did Dylan prepare for the party?</p>		
11.	<p>The sum of three numbers (X, Y and Z) is 154. Y is twice X, while Z is four times X. Find the sum of X and Z.</p>		
12.	<p>Brianna had three times as many books as Carl. After Brianna donated 75 books, she had half as many books as Carl. How many books did Brianna have left?</p>		
13.	<p>Five-eighths of the students in the theatre club are 5<sup>th</sup> graders and the rest are 6<sup>th</sup> graders. One-fifth of the fifth graders who are in the theatre club are also in the choir club. If 40 of those fifth graders are not in the choir club, how many students are in the theatre club in all?</p>		

14.	Mrs. Eldredge's class and Mr. Singleton's class have a total of 72 students. One-fourth of the students in Mrs. Eldredge's class and $\frac{2}{5}$ of the students in Mr. Singleton's competed at the Math Challenge Tournament. The number of students who did not compete at the tournament in Mrs. Eldredge's class is the same as the number of students who did not compete in Mr. Singleton's class. Find the total number of students who competed at the tournament from the two classes.	
15.	The sum of two decimals is 20.6. The difference between these two decimals is 7.5. What is the product of the two decimals?	
16.	The length of a rectangle is 30% of its perimeter. If the width of the rectangle is 24 cm, find the area of the rectangle.	
17.	A jar contains one quarter red jelly beans and three-quarters blue jelly beans. If Rama removes three quarters of the red jelly beans and one quarter of the blue jelly beans, what fraction of the jelly beans remaining in the jar will be red?	
18.	40% of the school students went to the National Museum of American History for a field trip. 20% of students went to the zoo. 50% of the remaining students went to a farm. Only 60 students didn't go to any field trip and stayed at school. How many students are there in this school?	

*Solution is available on January 21, 2022, at [www.mathinaction.org](http://www.mathinaction.org)*