

# Math Challenge #6



First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_ Grade: \_\_\_\_\_  
Teacher: \_\_\_\_\_ Parent's email: \_\_\_\_\_

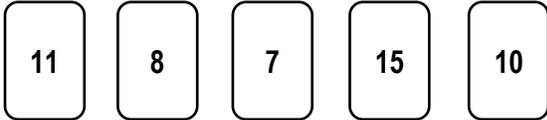
## Odd, Even, and Prime

Welcome to the Math Challenge #6. In this challenge, we explore Odd, Even, and Prime numbers! Many of the problems can be solved by making an organized list. For more information on this strategy, visit <https://www.mathinaction.org/problem-solving-strategies.html>. Enjoy this challenge and don't forget to ask your parents and siblings to help you solve these math problems.

If this is the first time you are working on a Math Challenge, please make sure you go to your school's page (<https://www.mathinaction.org/schools.html>) to find out how to submit your solution at your school.

**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.	How many odd numbers are from 0 to 10?	
2.	Which of the following numbers are even numbers?  	
3.	When Mia counts by 3, starting at 0 and ending at 15, how many times would she say the numbers that are odd numbers?	
4.	When Leonard adds 3 odd numbers, will it result in an odd number as well? Give two examples to verify your answers.	
5.	Tina colored her coloring book from the top of page 10 to the bottom of page 20. If she only colored even page numbers, how many pages did she color?	
6.	What is the sum of all even numbers between 1 and 15?	
7.	 <p>Tom practices on his piano recital song for one hour on every even number date throughout the month of July and August. He practiced on July 2, July 4, July 6, and so on. How many hours did he practice in total?</p>	

8.	<p>Students in Mrs. Thome’s class are discussing products of odd numbers. These are what 5 students said:</p> <ul style="list-style-type: none"> <li>• Al said, “When you multiply two odd numbers, the result is always odd.”</li> <li>• Bill said, “When you multiply four odd numbers, the result is always odd.”</li> <li>• Cam said, “When you multiply four odd numbers, the result is always greater than 20.”</li> <li>• Ditya said, “When you multiply two odd numbers, then add another odd number, the result is always odd.”</li> <li>• Emma said. “Only two of you have the correct statements.”</li> </ul> <p>Which students are correct?</p>	
9.	<p>Becca is listing all the odd numbers greater than 10 and less than 20 in order. She then creates another list by adding 1 to the first number, adding 2 to the second number 2, adding 3 to the third number, and so on.</p> <p>What will be the sum of the second list that Becca created?</p>	
10.	<p>Kevin’s favorite prime number is 6 less than another prime number. Francine’s favorite prime number is the only even prime number. If both their favorite prime numbers are less than 50, what is the greatest possible sum of Kevin’s and Francine’s favorite prime numbers?</p>	
11.	<p>Boris is thinking of a prime number between 40 and 50. Josh is thinking of a prime number between 10 and 20. The difference between the two numbers is 26. What are the two numbers?</p>	
12.	<p>Both 4 and 8 can be written as the sum of two prime numbers (<math>4 = 2+2</math> and <math>8 = 5+3</math>). How many numbers from 1 to 20 are there that can be written as the sum of two primes?</p>	
13.	<p>How many two-digit primes are there between 10 and 99 that are also primes when reversed? For example, the number 17 is prime, and its reverse, 71 is also a prime.</p>	
14.	<p>How many square numbers less than 101 are there that can be formed by adding two prime numbers together?</p>	
15.	<p>What is the largest 3-digit prime number?</p>	
16.	<p>How many numbers between 1 and 99 are the product of two even numbers?</p>	
17.	<p>What is the difference between the sum of all the even counting numbers up to 2020 and the sum of all the odd counting numbers up to 2020?</p>	
18.	<p>Trishla is making a list of all the numbers greater than 200 and less than 300, that can be formed by changing one digit (units or tens place) of the number 200. How many numbers on Trishla’s list are prime numbers?</p>	

*Solution is available on January 10, 2020 at [www.mathinaction.org](http://www.mathinaction.org)*