Guess the Number! Math Riddle

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

		Answer
1.	Daniel's secret number is an even number less than 10 but larger than 6. What is his mystery number?	*8*
2.	Myra's secret number has the following clues: • It is more than 7 + 3. • It is less than 8 + 5. • It's also an odd number. What is Myra's secret number?	*11*
3.	Lidia counted by twos. She started at 10 as the first number she said. What was the fifth number she would say?	*18*
4.	Tia's secret number is an even number. It is between 50 and 60. Its ones digit is the number of wheels on 2 bikes. What is Tia's secret number?	*54*
5.	The children from Rockwell's neighborhood had a big summer picnic. Children from different street corners came. Mrs. Gibson counted the number of children were at the picnic. Larissa asked her how many children came to the picnic, and Mrs. Gibson gave her these clues: • There were more than 45. • There were fewer than 54. • There was an even number of children. • The ones place is not 2 or 0. • The ones place is not 6 either. How many children came to the big picnic? 	*48*
6.	Mr. Sutherland is thinking of a number. It is less than 98. It is more than 91. If you count by 5 you will say this number. What number is Mr. Sutherland thinking of? When you count by 5, the number you will say always ends in 5 or 0.	*95*
7.	Alfred gave these clues about his secret number: Count by tens out loud and start with the number 525. The 8th number you will say is my secret number. What is Alfred's secret number? List them: 525, 535, 545, 555, 565, 575, 585, **595**	*595*
8.	Mr. Miller is thinking of two numbers. The two numbers have a product of 20 and a sum of 9. What are the two numbers? Think of the pairs of factors of 20.	*4 and 5*
9.	Laura's secret number has the following clues: • I am more than 650. • I have the digit 8 in the ones place. • I am less than 750. • The sum of my three numbers is 18. What is Laura's secret number?	*738* Because the digit in the ones place is 8, the possibility will only be 6__8 or 7__8. We know that three numbers' sum is 18. So, if it starts with 6, 18-8-6=4, the middle number will be 4, so the number will be 648 which is less than 650. So, the number won't start with 6. If it starts with 7, the middle number will be 18-7-8=5. So the number will be 738 which is more than 650 and less than 750. So the answer will only be

10. Bo's mystery number is an even number. It has four digits, and the digits add up to 3. If he rounds his number to the nearest thousands place, he will get 1000. If he rounds his number to the nearest tens, he will still get 1000. What is Bo's mystery number? The number range will be between 1000 and 1004 because if rounded to the nearest thousands place, he will get 100 and if rounded to the nearest tens, he will still get 1000. Sine the sum of 4 digits is 3, so the only possibility is 1002.

1002

11. Rhea's secret number is a three-digit number. The hundred's digit is an even number between 5 and 8. The ten's digit is 3 less than the hundred's digit. The one's digit is the hundred's digit plus the ten's digit. What is Rhea's secret number?
Since the hundred's digit is an even number between 5 and 8, the only possible digit is 6. The ten's digit is 3 less than 6, which is 3. The one's digit is 6+3 = 9. So, the number is 639.

639

12. Lewis secret number has 4 digits and it is a palindrome. A palindrome is a number that is the same when written forwards or backwards. The tens digit is the number of eyes you have. The ones digit is five more than the tens digit. What is his secret number? Since it's palindrome, and the tens digits is 2, so the hundred's digit is also 2. And the ones digit is 2+5=7, so the thousands digit is also 7. So, the number is 7227.

7227

13. Grace's mystery number is a three-digit number that is larger than 400 but less than 730. All three digits are odd and are different numbers. The sum **of** the digits is 11.
Since each digit is odd number, so we can rule out 400s and 600s. We can make a list: 513, 517, 519, 531, 537, 539, 571, 573, 579, 591, 593, 597, 713, 715, 719. You can see, the only number that meets all criteria is 713.

713

14. A list of clues is given to uncover Lisa's mystery number:
- The mystery number has 3 digits
- The sum of the digits is 12
- The number is less than 500
- The product of its digits is 50.

What is Lisa's mystery number?
Find factorization of 50. The only possibility to have a 3 numbers product equal to 50 is 5x5x2. And 5+5+2 = 12. Since the number is less than 500. So only possibility for three number combination is 255.

255

15. I am a two-digit number. The sum of my digits is 11. If my digits are reversed, I will be 45 less than who I am. Who am I? Think about the pairs of the digits that give the sum of 11: 9+2, 8+3, 7+4, 6+5. Then check for which pair all the clues are correct

83

16. Pete has the following clues to find Sam's secret number.
- It is a factor of 30
- It is not a prime number
- It is not a multiple of 3
- It is not less than 3.

What is Sam's secret number?
The fourth clue guarantees our answer is a positive integer. A factor of 30 limits us to 1, 2, 3, 5, 6, 10, 15 and 30. Because the secret integer is not a prime number, we are further limited to 1, 6, 10, 15 and 30. Since it is not a multiple of 3, we are now down to 1 and 10. The only option greater than 3 is 10.

10

17. Mr. Livingston's secret number has the following clues:
- Rounded to one significant figure, the number is 10,000.
- The number has 7 hundreds.
- It has 9 in its ones digit as well as in its hundredths digit.
- The number has 8 tenths.
- The 5^{th} and the 7^{th} digits are the same.
- There are two digits after the decimal point.
- To the nearest thousand, the number can be rounded to 15,000.
- There are two sevens.

14779.89

- First clue → the number has 5 digits, with the first digit 1, and the second less than 5: **1**_ _ _ _
- Second clue →**1_7**_ _
- Third clue →**1_7_9**.0**9**
- Fourth clue →**1_7_9.89**
- Fifth clue → Extra information
- Sixth clue → Extra information
- Seventh clue →**147_9.89**
- **14779.89**

18.	Mr. Zeek's secret number is the sum of three consecutive prime numbers and is also the product of two 2-digit prime numbers, what is the least possible value of Mr. Zeek's number? When you multiply two 2-digit numbers, the result is greater than 100. So, the consecutive numbers that are considered here are all two-digit numbers. To get the smallest possible sum, we need to have the least possible product of 2 primes, which is 11×13. The product: 11 x 13 = 143 and 143/3→ about 47. The two primes close in value to 47 are 43 and 53. So if we try the sum 43 + 47 + 53, it would equal 143. Another possible solution would be 121. Since the question did not specify that the prime numbers have to be distinct, the least value for the product of two-digit prime numbers is 11 x 11 = 121. And 121 is also the sum of three consecutive prime numbers: 37, 31 and 43.	*143* *or* *121* *We are accepting both 143 and 121.*

Solution is available on December 13, 2019 at www.mathinaction.org