Summer Work Packet for MPH Math Classes

Practice for
students going into Math 6
Sept. 2018

Name: _____

To be prepared to jump right into things in Math 6, please spend time this summer practicing your math facts. When you begin 6th grade, you should know your addition, subtraction, multiplication, and division facts from 1-12. This means you should know the answer to problems like 9 x 7 or 48÷12 without spending time working them out.

Good ways to practice include flash cards or practicing with a parent or friend.

There are lots of websites and apps that you can use to help practice your facts. It will be important you are fluent with them in the fall! If you have any questions, you may email Mrs. Reeve at sreeve@mphschool.org.

Math 6 Summer Reading   June 2018   Name: _____

<u>THE NUMBER DEVIL</u> by Hans Magnus Enzenberger

Publisher: Holt Paperbacks (May 1, 2000) **ISBN-10:** 0805062998 **ISBN-13:** 978-0805062991

Math is about more than numbers. It's also about patterns and making connections. This year you will be developing, analyzing and writing about mathematics and this book is a great starting point. You will need to read the **<u>first four</u>** chapters of this book this summer. As you are reading, briefly answer the following questions. Bring in this sheet with your answers to class in September, as it will be a helpful reminder about what you read over the summer.

1. What patterns are discussed in the book? Describe them for each chapter. Some chapters may have many, some few, or even none.

First Night

Second Night

Third Night

Fourth Night

2. Which new symbols did you learn about? What do they mean?

For the following questions, you may need to go back to the third chapter of THE NUMBER DEVIL. Feel free to use a calculator or spreadsheet.

Instructions to the composition question:

3. What types of numbers are represented by the Prima Donna numbers?

4. What are the characteristics of these numbers?

5. After reading the passage below, explain why, mathematically, Robert can't divide by zero.

> **Robert thought and thought. "The only way I can come up with,"**
> **he said at last, "is to divide it by nineteen.**
> **Or into nineteen equal parts."**
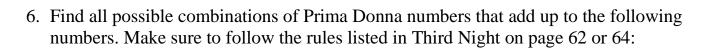> **"Doesn't count," the number devil replied. "It's too easy."**
> **"Or divide it by zero."**
> **"Out of the question."**
> **"Out of the question? Why?**
> **"Because it's forbidden. Dividing by zero is strictly forbidden."**
> **"What if I did it anyway?"**
>
>   *-The Number Devil* **p.53-54**

(You may write your answer here)

6. Find all possible combinations of Prima Donna numbers that add up to the following numbers. Make sure to follow the rules listed in Third Night on page 62 or 64:

12   18   24

30   36   42

7. Notice you did not use any 2's. Why do you think this was the case?

8. Find all possible combinations of Prima Donna numbers that add up to the following numbers. Make sure to follow the rule listed in Third Night on pages 62 or 64:

15   17

31   35

9. Did you use the number 2 in any of your combinations? If yes, explain how you used it. If no, explain why it wasn't used.

10. Explain why you always need two prima donna numbers to add to an even number, but you need three for all the odd numbers.