

MATH 4: ASSIGNMENT 5
OCTOBER 20, 2019
HOMEWORK

Please check classwork. I posted links to videos about the material we learned.

1. Find prime factorizations of each of the following numbers: 16, 32, 64, 128, 256.
2. Find prime factorizations of each of the following numbers: 27, 81, 243, 729
3. Using prime factorization find LCM and GCD of
 - a. 24 and 60
 - b. 48 and 36
 - c. 176 and 528
4. In some school, every lesson is 45 minutes long, with three minute break between lessons. The first lesson starts at 8:00am. When will be the next lesson that starts on an hour sharp (i.e. at some hour and 00 minutes)?
5. Ages of Amanda, Sara, and Carly are prime numbers. Carly's age is the sum of ages of Sara and Amanda. Amanda is the youngest. How old is Amanda?
6. Consider the number $5 \cdot 5 \cdot 2 \cdot 2 \cdot 2 \cdot 7 \cdot 11$. Do you think it is a multiple of 10? Of 100? Of 1000? In how many zeroes does it end? [*hint: try doing it without performing the multiplication*].
7. Solve the following puzzle (a letter stands for a digit):
 $IT \times AT = 2001$ [*Hint: 2001 is in fact divisible by 23.*]
8. (*)In a some remote village many years ago villages successfully bred dragons. In a flock of 67 dragons one dragon breeder counted 48 Fire-Breathing Dragons, and another dragon breeder counted 47 Steam-Breathing dragons. Both swore there were no mistakes. Explain [*Hint: graphic explanation using Venn diagram will be a good choice.*]