

**MATH 5: HANDOUT 1**  
**REVIEW I**

REVIEW TOPICS

- Division with remainder. Divisibility tests by 2, 3, 4, 5, 6, 9. Divisors (factors), multiples.
- LCM, GCD. Finding by listing of all divisors.
- Prime and composite numbers. Prime factorization.
- Finding GCD and LCM using prime factorization.

PROBLEMS

1. Find the following sums

$$1 + 2 + 3 + \cdots + 49$$

$$1 + 3 + 5 + \cdots + 49$$

2. Is the number 12345 divisible by 3? by 9? by 5? by 10?
3. If it is 7am now, what time of the day will it be in 27 hours? 127 hours? 11043 hours?
4. A package of plastic forks contains 16 forks. A package of plastic knives contains 12 knives. What is the smallest number of packages of each kind you have to buy to get exactly the same number of forks as knives?
5. Find a prime factorization of 204.
6. Find LCM and GCD of 365 and 30.
7. Consider the product of all numbers from 1 to 25:  $1 \times 2 \times \cdots \times 24 \times 25$ . How many 3s will there be in the prime factorization for this number?
8. Compute  $\frac{14}{7} + \frac{45}{11}, \frac{7}{10} - \frac{1}{2}$ .
9. Compare  $\frac{11}{6}$  and  $\frac{7}{4}$ .
10. Compute

$$(a) \frac{3}{14} \times \frac{7}{9} \quad (b) \frac{12}{33} \times \frac{55}{56}$$

11. Compute

$$(a) \frac{3}{14} \div \frac{7}{9} \quad (b) \frac{12}{33} \div \frac{55}{56}$$

12. Mrs. Weatherby baked 175 cookies for a party. The children ate  $\frac{4}{7}$  of the cookies. The adults ate 48 cookies. How many cookies were left?
13. There are 4 short stories in the book. The first story is 12 pages long, which is  $\frac{2}{3}$  of the second story. The third story is  $\frac{5}{6}$  of the length of the first two stories together. How long is the fourth story, if four stories together occupy 64 pages in the book?