NON-GRADED QUIZ ON NUMBER THEORY

(1) Perform the following whole number computations:

(a) 608 + 79

(b) 608 – 79

(c) 608 × 79

(d) 608 ÷ 79

(2) (a) List the prime numbers less than 100.

(b) List the first 10 square numbers.

(c) List the first 5 cube numbers.

(3) The terms “carry” and “borrow” are no longer used when adding and subtracting. What term is used instead? What does that term mean?

(4) What do the following words mean in mathematics?

per

quotient

sum

product

difference

of

each

total

(5) Write 215,369 in expanded notation using exponents.	**(6)** Round off 0.215369 to the nearest thousandth.
(7) Estimate 35×65	**(8)** What is the GCF and the LCM of the following? (a) 6 and 8 (b) 12 and 10 (c) 12 and 15 (d) 2 and 3
(9) Give the prime factorization of 120.	**(10)** Perform the following computations: (a) 12.345×10^3 (b) $12.345 \div 10^3$ (c) 58×10^2 (d) $58 \div 10^2$

(11) Which of the following has a 3 in the hundredths place?

(a) 123.456

(b) 1234.56

(c) 1.23456

(d) 12.3456

(12) Classify these numbers as odd, even, prime, composite, rational, irrational, whole, natural, and integer.

(a) 91

(b) -91

(c) 1/9

(d) 3.14

(e) $3.3333\overline{3}$

(f) $\sqrt{2}$

(g) $\sqrt{4}$

(13) Compute:

$$10 + (12 - 5) \times 4$$

(14) Give a counterexample for each of the following:

(a) All prime numbers are odd

(b) The sum of two consecutive numbers is always even

(c) Odd numbers are always multiples of 3 or 5.

(15) Explain the algorithm for long division.

(16) Joe fills up his car every 3 days. Bob fills up his car every 7 days. Assuming both fill up their cars on the January 1st, how many days of the year will both cars be filled up on the same day?

(17) Using the letters a, b, and c, give example of the following properties: (a) Associative (b) Commutative (c) Distributive (d) Inverse (e) Identity	**(18)** Answer the following: (a) 12 pencils go in each box. How many boxes will be needed for 77 pencils? (b) How many 3-foot boards can be cut from sixteen 8-foot boards?