

Quiz #1
Foundations for College Algebra
University of North Georgia
Fall 2015

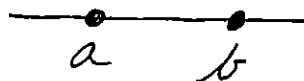
Name: Key Date: August 21, 2015

1. Is the following set *finite* or *infinite*: $S = \{0, 1, 2, \dots, 150, 151, \dots\}$? Support your answer with a brief explanation.

S is infinite, because the three dots, called "ellipses", at the end indicate the pattern continues forever.

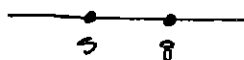
2. a.) State the **Ordering Principle**, b.) Give an example of its use, and c.) Explain its importance in mathematics.

a.) Suppose "a" & "b" are whole numbers located on a number line. If $a < b$, then "a" is to the left of "b" making it smaller than "b". Note: see Grouping numbers on the number line



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b.) $5 < 8$



c.) The value of a number is determined by some relationship with another number: $a < b$, $a = b$, $a > b$

3. Expand the following number 253,134 using the set $D = \{0,1,2, \dots, 9\}$ and state name of each *place value*.

$$2 \cdot 100,000 + 5 \cdot (10,000) + 3 \cdot (1,000) + 1 \cdot (100) + 3 \cdot (10) + 4 \cdot 1$$

Hundred Thousand Ten Thousand Thousand Hundred Ten one

4. Is the following true: $87 > 53$? Why?

True, because 87 is to the right of 53, given the Order Principle, or more units away from zero than 53 is.

