Unit 8 Day A ~ Imaginary Numbers ~ Definitions

* 1. Imaginary Number: ; If a is a positive real number, then the principal square root of negative a is the imaginary number ; that is, . (Extends the existing number system by giving a solution to problems that look like: .)
  2. Complex Number – is a number in the form , where are real numbers and . The number  is the real part of  and  is the imaginary part. Any solution should be written in this form. (It is customary to put  in front of a radical if it is part of the solution.)
  3. Patterns of  - To determine the value of to any power just find the largest multiple of 4 and  to that multiple of 4 =1 then the remainder is the exponent of  that is evaluated and multiplied by 1. Example: .



Examples:

1. 
2. 
3. 

Evaluate:



Simplify:

