

## Tuesday/Thursday Enrichment Math Notes for November 1, 2016

We did 3b) from More Powers on the board.

Write out the answers as a product of a number and a power of ten. (directions)

7 billion + 400 million (original problem)

Felicia's Way: (convert numbers to standard form first)

7,000,000,000 + 400,000,000 convert numbers to standard form first

7,400,000,000 Do math.

$74 \times 10^8$  This is an acceptable way to write this as a product of a number and a power of ten

$7.4 \times 10^9$  This is written in scientific notation. Both of these answers are acceptable.

Brad or Carlo's way:

$7 \times 10^9 + 400 \times 10^6$  (Convert numbers to product of a number and a power of ten)

Brad's way - get the big exponent in common (Big Brad)

Carlo's way - get the low exponent in common (Low Carlo)

The goal is to have the exponents match on the ten so that we can use the Distributive Property to get the final answer.

Brad's way:

Change  $400 \times 10^6$  to  $(0.4 \times 10^3) \times 10^6 = 0.4 \times (10^3 \times 10^6) = 0.4 \times 10^9$

$7 \times 10^9 + 0.4 \times 10^9$  Use the Distributive Property to get to the next step

$10^9 \times (7 + 0.4)$  This is the Distributive Property. Now do math to get to the next step.

$7.4 \times 10^9$  Notice this is in scientific notation

Carlo's Way:

Change  $7 \times 10^9$  to  $(7 \times 10^3) \times 10^6 = 7,000 \times 10^6$  Make the powers match

$7,000 \times 10^6 + 400 \times 10^6$  Rewrite/do math

$10^6 \times (7,000 + 400)$  Use the Distributive Property

$7,400 \times 10^6$  Do math. This is an acceptable final answer.