N3CS19 Practice Set 14

Instructions: Answer each question on loose leaf, quad-ruled (graph paper), headed properly and written in lead-graphite. Remember to fold paper along the center, work exercises in order top to bottom, left column then right column. Staple multiple pages. ***If your current grade pct. is ≥82%, you may complete between 2 and 4 exercises per section.***

1) Determine the Perimeter of squares with the given area.

a) $196m^2$ b) $289mm^2$ c) $729cm^2$ d) $5.29ft^2$

2) Simplify; write exponents as positive.

a) $2x^3 \bullet 4x^2$ b) $3x^2y^3 \bullet 4x^4y^2$ c) $\dfrac{6x^2y^4}{8x^5y^2}$ d) $\dfrac{\left(4x^2y^{-3}\right)^2}{\left(2x^3y\right)^3}$

3) Determine the volume of cubes with a given side length; all units are in meters (m). Recall the volume formula: $V = l^3$

a) $3x$ b) $4x^2$ c) $2x^2y^3$ d) $\dfrac{2}{3}x^4y^2$

4) Write the following in Scientific Notation.

a) 16.23 b) $1{,}623$ c) $1{,}623{,}000{,}000$ d) 0.0000001623

5) Estimate the following to the nearest integer.

a) $\sqrt{40}$ b) $2\sqrt{30}$ c) $5\sqrt{32}+3$ d) $3\sqrt{45}-2\sqrt{10}$

6) Set these decimals up to divide, i.e., write what is 'in the box' and 'outside the box,' and 'move' the decimals appropriately and accurately.

a) $1.96 \div 1.4$ b) $72.9 \div 2.7$ c) $2.89 \div 0.17$ d) $1.024 \div .032$

7) Valerie O's bottle rocket, 'Five,' had the following recorded times: 4.75s, 4.53s, 4.59s. Determine Valerie's ***mean (average)*** time. Round to the nearest 100th

8) Compute in Scientific Notation.

a) $\left(1.6 \bullet 10^3\right)\left(1.6 \bullet 10^2\right)$ b) $\left(3.02 \bullet 10^{16}\right)\left(2.0 \bullet 10^7\right)$ c) $\left(5.76 \bullet 10^{-3}\right) \div \left(2.4 \bullet 10^2\right)$

d) $\dfrac{9.61 \bullet 10^4}{3.1 \bullet 10^{-4}}$