N3CS19 Practice Set 17

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 of the 3 sections.***

1) Write the repeating decimal as a fraction, reduced to lowest terms: $0.\overline{87}$

2) Estimate the irrational expression: $2+\sqrt{30}$ 3) Compute the sum: $1.82\times10^{8}-9.5\times10^{6}$

4) Simplify the expression; write exponents as positive: $\frac{n^{9}}{n^{-3}}$ 5) Multiply: $\left(4x^{3}\right)^{2}$

6) Solve for x: $x^{2}=676$ 7) Name the number families -0.67 belongs to.

8) What number can I add to $-5\frac{2}{3}$ such that the sum is zero? *Justify your argument with evidence.*

9) Write the repeating decimal as a fraction, reduced to lowest terms: $2.\overline{123}$

10) $\sqrt{40}$ is <, or > 6? Justify your argument with evidence.

11) $\frac{2.7\times10^{3}}{4.8\times10^{-4}}=$ 12) Simplify; write exponents positive: $\left(3x^{-5}y^{3}\right)^{3}$

13) Solve for x: $x^{2}=\frac{324}{144}$ 14) Name the number families the expression $\sqrt{2}-1$ belongs to. *Justify your argument with evidence.*

15) What number can I multiply $-5\frac{2}{3}$ by such that the product is 1? *Justify your argument with evidence.*

16) Simplify the expression; write exponents as positive: $\frac{\left(8a^{2}y^{3}\right)^{2}}{16a^{3}y^{6}}$

17) Write the repeating decimal as a fraction, reduced to lowest terms: $3.4\overline{8}$

18) Playing Elite Dangerous™ Mr. Ford jumped into a system with a 110,000 Ls distance to the station. Mr. Ford fell asleep and was 1,210,000, Ls from his station! How far did he have to travel? Express in scientific notation.

19) Estimate the irrational expression $\frac{1+\sqrt{5}}{2}$ 20) Simplify the expression; write exponents positive: $\frac{\left(2x^{-2}y^{3}\right)^{3}}{6x^{-2}y^{10}}$ 21) A square has an area of $3.24mi^{2}$; determine its perimeter.

22) Solve $l^{3}=-512$ for l; to what number families does the solution belong to? *Justify with evidence.*

23) How much kinetic energy does $1kg$ have moving at a speed of $1\frac{m}{s}$?

24) In the equation $-\frac{4}{5}x=-8$, what can I multiply $-\frac{4}{5}x$ by such that the left side of the equation is $1\bullet x$? *Justify your argument with evidence.*