

N3CS19

Practice Set 18

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 $\geq 82\%$, you may complete between 2 of the 3 sections.

- 1) In the equation $x + 13 = 99$, a) what must I add to the left side of the equation to isolate 'x'?
 b) To keep the equation balanced, what must I add to the right side of the equation?



2) Estimate the irrational expression: $5 \cdot \sqrt[3]{-400}$ 3) $(6.2 \times 10^{-4})(1.7 \times 10^7) =$

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

- 6) In the equation $-3x = 17$, a) what must I multiply the left side to isolate the 'x'? b) To keep the equation balanced, what must I multiply the right side by?

7) Name the number families $\sqrt{625}$ 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) In the equation $-6.7 + n = 4.2$, add 6.7 to both sides, and compute; what does the equation look like now? 10) $3\sqrt{8}$ is $>$, or $<$ 9? 11) $1.2 \times 10^8 - 9.25 \times 10^6$

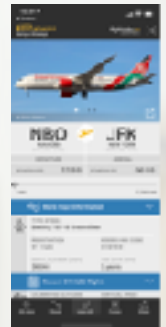


12) Simplify; write exponents positive: $(-8x^{-4}y^{-2})^3$

13) Simplify the radical: $\sqrt{48}$ 14) In the equation $-\frac{3}{4}n = \frac{5}{9}$, multiply both sides of the equation by

$-\frac{4}{3}$ and simplify; what does the equation look like now? 15) $\frac{1.2 \times 10^3}{8.4 \times 10^{-5}}$

- 16) In the photo at right, what family of numbers do the scheduled Departure and Arrival times belong to?



17) Write the repeating decimal as a fraction, reduced to lowest terms: $1.8\bar{3}$

18) The electron in a Hydrogen atom is $5.3 \times 10^{-11} m$ from the nucleus. The Earth is 146.9 billion meters from the Sun. How many times larger is the Earth's distance to the Sun than a hydrogen electron to its nucleus?



19) What must be done to balance the equation $x + 7 = x$?

20) Simplify the expression; write exponents positive: $\frac{4n^2b^4}{(2n^{-2}b^3)^3}$

21) A square has a perimeter of 72cm; Determine it's area.

22) Solve $n^2 = 24$; simplify the radical.

23) Which has more energy, and by how much more? The Potential energy of a 20kg object at a height of 0.75m, or the Kinetic energy of a 20kg object moving at $2.4\frac{m}{s}$?

24) What must be done to the equation $-\frac{4}{5}x = x$ to keep it balanced?