N3CS19

Practice Set 22

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

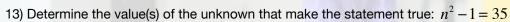


- 1) Simplify the expression 2+6(x+3)
- 2) Simplify the expression 3x (3 + x)
- 3) Simplify the expression x-4(2x-3)-5
- 4) Determine the value of the unknown that makes the statement true: x 4.7 = -2.3
- 5) Determine the value of the unknown that makes the statement true: $-\frac{3b}{2} = \frac{12}{5}$
- 6) Determine the value of the unknown that makes the statement true: $8 \frac{3}{4}w = 2$

7) Lockheed-Martin's Mars Insight spacecraft cost \$828 million. LeBron James' salary with the Lakers is \$153.3 million. How many times larger is the cost of the Insight spacecraft to LeBron's Laker salary? Express your solution in scientific notation and standard form, rounded to the nearest 100th.



- 8) Is $\sqrt{12}$ between 0 and 4 on a number line? Justify with evidence.
- 9) Evaluate the expression $(-4 \cdot 2)^{-2}$
- 10) Simplify the expression $\frac{x^{-2}y^3z^5}{x^{-2}y^{-3}z^{-4}}$
- 11) Select all possible values for the unknown that make the equation true: $x^2 = 48$
- A) √48
- B) $24\sqrt{2}$ C) $-4\sqrt{3}$
- D) $-16\sqrt{3}$
- 12) The Earth is about $149.6 \times 10^6 \, km$ from Sol (the Sun); Mars is about $227.9 \times 10^6 \, km$ from Sol. Use these values to determine the distance between the Earth and Mars; express your solution in Scientific Notation and Standard Form.



- 14) A cube has a surface area of $384cm^2$; determine the cube's volume.
- 15) What value of k makes this equation true? $\frac{5 \cdot 5^k}{5^{-8}} = 5^3$
- 16) An object of with a mass of 4kg has kinetic energy of 196J; using the equation
- $196 = \frac{1}{2}mv^2$, determine the object's velocity.

