

N3CS19

Practice Set 39

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



- The tubes of lip gloss in Mr. Ford's 4th period is directly proportional to the number of girls in 4th period. There are 35 tubes of lip gloss for 14 girls.
 - Determine the variation constant and write a variation equation for the tubes of lip gloss to the girls in Period 4.
 - Use your variation equation from part 'a' to determine the tubes of lip gloss among 70 girls.
- Gv1 pg 196 # 7
- Gv1 pg. 196 # 8
- Gv1 pg. 196 # 10
- Gv1 pg. 197 # 16
- Gv1 pg. 198 # 18
- If Distance varies directly with time, derive a direct variation equation for distance versus time (*hint, your equation should have the variables 'd', 't', and 'k'*)
- If Pressure (P) varies directly with Temperature (T), derive a direct variation equation for Pressure vs. Temperature (*hint: your equation should have the variables 'P', 'T', and 'k'*)

- Gv1 pg. 198 # 20
- Gv1 pg. 198 # 22
- Gv1 pg. 198 # #24
- Graph the line from question 11; is the line slanted, horizontal, or vertical?
- Study the table and information at the right; your answer choices are below:
 A) $c = 5p$ B) $c = 6p$ C) $c = 10p$ D) $c = 30p$



The table shows the proportional relationship between the cost in dollars (c) of meat and the weight in pounds (p) at Lane Grocery Store.

p	c
3	15
5	25
7	35
9	45
10	50

- "The in a coordinate plane the rate of change.....EVERYBODY knows it's the":
 a) axis b) direct variation c) slope d) origin
- Explain why, or why not $19.61 \cdot 10^{58}$ is written correctly in scientific notation. (*hint: One sentence is enough, a paragraph is too much!*)
- Jupiter is approximately 778,000,000 kilometers from Sol (the Sun). What is this distance in scientific notation?
 A) $7.78 \cdot 10^8$ B) $778 \cdot 10^6$ C) $778 \cdot 10^{-6}$ D) $7.78 \cdot 10^{-8}$
- Re-write each expression using the Definition of Subtraction, then add:
 a) $8 - (-6) =$ b) $6 - 13 =$ c) $-7 - (-14) =$ d) $6 + (5 - 9) =$ e) $8 - (11 - 17)$
- $\frac{62}{48} =$; write as a decimal rounded to the nearest 100th.
- $15 - 3\frac{4}{9}$; write as an improper fraction and a decimal rounded to nearest 10th.
- Translate into a formula: "Mach Number (M) is the ratio of an object's velocity (v) to the Speed of Sound (a)."
- A Boeing 787-9 can reach an altitude of 6 miles in about 30 minutes. What is its climb rate in ft/s?

Select the equation that shows a cost of meat per pound which is twice the cost of the meat at Lane Grocery Store.



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22. State the property that justifies each step of the following solution:

$$8 - \frac{3}{8}b = -3$$

$$8 + \frac{-3}{8}b = -3$$

$$8 + -8 + \frac{-3}{8}b = -3 + -8$$

$$0 + \frac{-3}{8}b = -3 + -8$$

$$\frac{-3}{8}b = -11$$

23. Write as exponents positive: $\frac{-9u^8v^2}{-6u^2v^6}$

24. Multiply; write as exponents positive: $3ab(2ab^2)^4 =$

25. Solve: $17 - \frac{9}{8}x = 20$; write as an improper fraction, mixed number, and decimal rounded to the nearest 10th.

26. Determine the value of the unknown that makes the statement true: $\frac{1}{2}r + 2\left(\frac{3}{4}r - 1\right) = \frac{1}{4}r + 6$

27. A square has an area of $784m^2$; what is the square's perimeter?

28. A cube has a volume of $1728in^3$; what is the cube's surface area?

29. In scientific notation, what is the sum of $4.7 \cdot 10^8 + 3.141 \cdot 10^7$?

30. Evaluate $(8.4 \cdot 10^{-8})(5.0 \cdot 10^2)$; write in scientific notation.

31. Estimate the difference: $\sqrt{140} - \sqrt{90}$

32. The Moon is about 240,000 miles from Earth. Students traveling to China will fly about 5,400 miles.



a. Write both distances in scientific notation.

b. How many times larger is the distance from Earth to the Moon than from Los Angeles in China?

Express your solution in standard form and scientific notation.

33. In the equation $2(3x + 1) = \underline{\hspace{1cm}} - 4x$, what constant (number) can be placed in the blank such that $x = 1$?

34. Relationship 'A' is defined by the equation $y = 9x$. Relationship B is defined by the table. If both 'A' and 'B' are proportional relationships, How many units greater is the rate of change of Relationship 'B' than Relationship 'A'?

Relationship B

x	y
0	0
3	34.5
5	57.5
8	92