N3CS20

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

- 1. What new topic did we engage last week? Provide examples and non-examples.
- 2. How does determining if a coordinate satisfies an equation relate to writing an equation of a line given two points on the line?
- 3. How could you write the equation of a line between two points in slope-intercept form *without* using the slope $v_{1} v_{2}$

formula, $m = \frac{y_2 - y_1}{x_2 - x_1}$? Justify your argument with evidence.

4. Write the following equations in slope intercept form, and graph them on the same coordinate plane. -3x + 2y = 2, 2x + 3y = 6

a. Do the lines intersect? If so, what is the coordinate of their intersection?

- 5. Write the equation of the line that passes through the points (-1, -4), (2, 0).
- 6. You have now derived the following formulae: y = mx, y = mx + b, and now $(y y_1) = m(x x_1)$; which equation connects all three of these formulae? Justify your argument with evidence.
- 7. Gv1 pg. 225 #7
- 8. Gv1 pg. 225 #8
- 9. You want to enclose a square in your back yard with a fence that's 500sq ft, but you only want to use whole number length sides. What's the smallest perimeter your square can be? Justify your argument with evidence.
- 10.

Keisha is writing a report on state capitals. She notes that in 2010, Frankfurt, Kentucky, had a population of about 26,000, while Montgomery, Alabama, had a population of about 2.3 × 10⁵. Write in the spaces provided to make each statement true. 8.EE.4

The population of	is greater than the population
of	 -

In scientific notation, the difference in the number of people living in the

two capitals is

11.

Dayshawn has a storage cube with a volume of 7 cubic feet. What is the shortest space in feet in which the cube will fit? Explain. 8.EE.2

12.

 The table shows expressions to represent the number of eighth-grade students enrolled in different world language classes. The number of students enrolled in French and German is equal to the number of students enrolled in Chinese and Spanish. 8.EE7, 8.EE7b

Class	Number of Students
Chinese	20
French	70+6
German	4n - 2
Spanish	2(4n + 6)

Port A: Model the situation with an equation. Write the appropriate expression in each box.

]+	

21	7n+6	
40-2	2(4n + 6)	

Part B: Solve the equation. Then identify the number of students enrolled in each language class.

n =	
Chinese: students	German: students
French: students	Spanish: students

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13.	
	Peer is making a quit. One quit piece is shaped like the trapezoid shown. The fabric to make the cuit piece has an area of 22.5 square inches. The formula for the area of a trapezoid is $A = \frac{1}{2}mb_1 + b_2$. 8 EE7 8 EE7b
	Part A: Write an equation you can use to find the length of the top base Giv. In the cult plece. Then find the base length.
	Equation
	Base leng/s
14.	
	Write the equation that is represented by each graph. 0.00.0, 0.00.0c, 0.7.5
	3x + 4y = 12 $4x + 3y = 12$ $3x - 4y = -12$ $4x - 3y = -12$
15.	
	Line on hes a slope of $\frac{3}{2}$ and passes through (0, -1). Line and Demetrius each point to (0, -1). Line then moves her finger 6 units to the right. From there, how many units up is line m? Denetitus moves his finger 5 units down. From there, how many units left is line m? GED.5 Line:
	Dometrius:
16.	
	The total cost in dollars y of buying peanuts at a health food store varies
	directly with x, the number of pounds purchased. Macadamia nuts cost
	the cost y of buying x pounds of macadamia nuts. 8.EE.5
	Peenus (ib), x 2 4 6 8 Cost (\$) x 9 19 27 26

17. The following is the aircraft Energy-Manuverability Theory formula of excess energy, P_s :

 $P_s = V\left(\frac{T-D}{W}\right)$, where V = speed, T = thrust, D = drag, and W = weight. Solve this equation for (T-D) in terms of P_s , V, and W, i.e., (T-D) is on one side of the equation, and everything else is on the other!