## 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 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. $-3 x+2 y=2,2 x+3 y=6$
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: $y=m x, y=m x+b$, and now $\left(y-y_{1}\right)=m\left(x-x_{1}\right)$; 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 500 sq 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. Stee notes that in 2010 ,
Frankfurt, Kentucky, had a population of about 26,000 , while
Montgomery, Alabame, had a population of about $2.3 \times 10^{2}$. Vitite in
the spaces provided to make each statement true. 8.EE. 4
The population of $\square$ is grester than the population


In scientific notation, the difference in the number of people iving in the
two capitals is $\square$
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. 日.EE. 2
12.

The table shouss experesslors io represent the nurnber of eighth-gode studers evioled in dfferoat world language dasses. The number of studens envolied in Frerch anc German is equal to the nurber of stadents enroiedi in Crinese and Spanish. 8.EET, E.EE70

Part A. Mocel the situation wht an equation. Werile the eporooriate expmess on in eact box.


Port Be selve the equation. Then idervify the nunber of studerts enroled in each larcuage cass.
$n=\square$

Conese: $\qquad$ students Gernare $\square$ swoens

Fiench: $\square$ trdents
§pasish $\square$ stucents

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13.

Pern is makinj a quit. One quit picce is shapec like the trapeadid
 Inches. The formula for te aress of 6 trapeacid is $A=\frac{1}{2}+1 b_{1}+t_{2}$; RFE7 REFA




Equatiert $\square$
Buse korylt, $\qquad$
14.

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$$
3 x+4 y=12 \quad 4 x+3 f=12 \quad 3 x-4 y=-12 \quad 4 x-5 y=-12
$$




$\square$

15.
 L.st and Demetnies osth point to (0) =1) Lez fer moves her finget 6 units to the right. From tere Iuw mary urls upls lie tr? Deretulus manes hlls fingar 5 urite down. Fren theic, how mary urite lef: ollire off $3[5 / 3$


16.

The total cost in collars y of buying peanuts at a health food store varies clipectly with $x$, the number of pounds purchesed. Macadaria nuts cost 4 times as much as peanuts at the store. Write an equation to represent the cost $y$ of buying $x$ pounds of macadamia nuts. 8.EE. 5

| Peanuts (lb), $x$ | 2 | 4 | 6 | 8 |
| :--- | :---: | :---: | :---: | :---: |
| Cost (\$), $\boldsymbol{y}$ | 9 | 18 | 27 | 36 |

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 $\mathrm{V}=$ speed, $\mathrm{T}=$ thrust, $\mathrm{D}=$ drag, and $\mathrm{W}=$ 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!
