

Numeric Response
Midterm Review
Hints / Example Problems

#1) 60 friends
 $\frac{1}{3}$ of 60 friends live on same street.

$\frac{2}{3}$ of $\frac{1}{3}$ of 60 friends live on same street and have same # of brothers and sisters.

of \Rightarrow multiplication.

#2) She has 24 feet of string.
Each instrument requires $5\frac{3}{4}$ feet of string.

How many instruments can she make?

#3) $y = \text{total cost}$
 $x = \# \text{ of Pounds}$

The question asks how much would 16 pounds of dog food cost, so $x = 16$... plug it in to equation!

#4) $1 \text{ AU} = 149,600,600 \text{ km} = 1.496006 \times 10^{10}$

if mars is $2.279 \times 10^8 \text{ km}$ from the Sun,

$\frac{2.279 \times 10^8}{1.496006 \times 10^{10}}$ is how Mars is from the Sun in AU

#5) This is a linear equation in slope - intercept form.
You have to write the equation, then solve for x .

x = # of refills

y = total cost of popcorn

m = slope, rate, cost of each refill.

b = initial cost of popcorn.

$$y = mx + b$$

After you get an equation for above, plug all information in, then solve for x .

#6) set up a proportion!

$$\frac{\text{time 1}}{\text{miles traveled 1}} = \frac{\text{time 2}}{\text{miles travelled 2}}$$

solve the proportion for the one missing piece.

SHORT ANSWER
Midterm Review
Hints / Example Problems

- #1) 24 students
 $\frac{3}{8}$ of 24 students have brown hair
 $\frac{1}{3}$ of $\frac{3}{8}$ of 24 students wear glasses & have brown hair.

of = multiplication!!!!

- #2) you've got this one! ☺

- #3) @we've practiced a lot of these in class!
 plug-it in!

- ⑥ graph the points. ...
 remember (x, y)
 ↑ side-to-side ↑ up or down.

- #6) standard notation is ONE number. Just the answer.

- #8) one sticker is 2^{-5} inches thick.
 You place 2^6 stickers, each 2^{-5} inches thick on top of each other.
 How thick is your stack?

- #9) 10^4 silkworms to make a scarf.
 10^9 silkworms to make a sheet.
 How many more silkworms are needed to make a sheet?

- #10) ? $\begin{array}{c} 2 \\ \square \\ 2 \end{array}$? all sides are equal.
 so how long is each side given
 the area is 91 feet^2

*remember to multiply the sides by 4
 to get how much fence he has to buy.

- #11) just break it up into perfect squares, then
 bring perfect squares out!

$$\text{Ex: } \sqrt{150} = \sqrt{25 \cdot 6} = 5\sqrt{6}$$

- #12) Work backwards.

A = houses in Antonio's subdivision -
 H = houses in Hector's subdivision

$$H = \frac{A}{4} + 15 \quad (\text{The first sentence told me this})$$

$$47 = \frac{A}{4} + 15 \quad (\text{Question tells us Hector's subdivision has 47 houses})$$

Now solve for A !

#13) $\text{total} \geq \text{amt wants to spend each day} \times \# \text{ of days}$

#14) This is a linear equation in slope-intercept form

$$y = mx + b$$

\uparrow starting amt
 \uparrow amt that changes.
 a negative = losing \$.

#15) This is a linear equation in slope intercept form.
 first write the equation.
 second substitute 12 ounces = x to find total cost.

$$y = mx + b$$

\uparrow starting point / initial cost.
 \uparrow # of ounces
 \uparrow Price per ounce
 \uparrow total cost.