

**Directions: Complete each Math 1, 2, or 3 problem. Must show work for credit!**

- 1.) Solve inequality & put answer in interval notation:  
 $-8(x+3)+2(-6x-4) \geq 7x+5x$

$$(-\infty, -1]$$

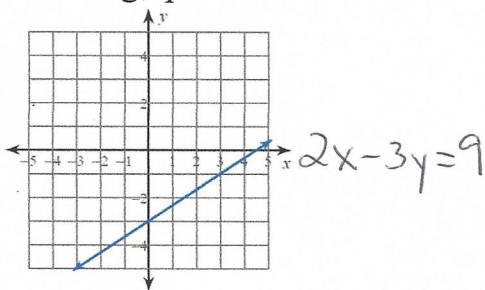
- 2.) Given:  $f(x) = 2x + 4$   
 Find:  $f(12) + 3f(-5)$

$$10$$

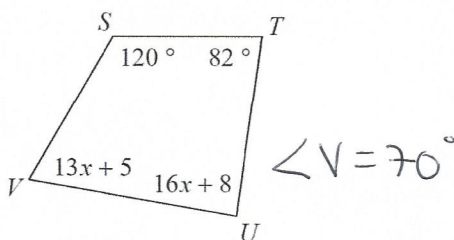
- 3.) Simplify:  $\frac{x^2 - 2x - 48}{2x^2 - 12x}$

$$\frac{x+8}{2x}$$

- 4.) Write the standard form of the line graphed below:



- 5.) Given: Quadrilateral STUV  
 Find: measure angle V



- 6.) Solve for x:  
 $x - \sqrt{8x - 15} = 0$

$$x = 5$$

$$x = 3$$

- 7.) George spent \$13.25 on 4 hotdogs and 5 bags of chips. Kong spent \$12.70 on 3 hotdogs and 7 bags of chips. Ben wants 6 hotdogs and 3 bags of chips. How much will Ben have pay?

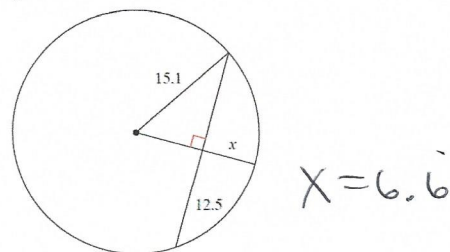
$$\$16.05$$

- 8.) Simplify completely:

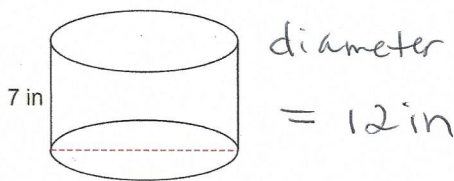
$$\frac{8x^{-1}(x^3)^{-2}}{2x^4}$$

$$\frac{4}{x^{11}}$$

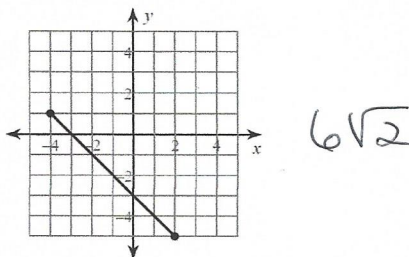
- 9.) Find value of x:



- 10.) The volume of a cylinder below is  $791.7 \text{ in}^3$ . What is the diameter of the cylinder?



- 11.) What is the length of the line segment below? Keep in simplified radical form.



- 12.)  $P(x) = x^3 + 9x^2 + 8x - 60$  with has factors of  $(x+5)$  and  $(x-2)$ . What is its remaining factor?

$$x + 6$$

- 13.) What is the mean, median, and mode of data below?

Age at First Job

$$\text{mean} = 15.6$$

$$\text{median} = 17$$

$$\text{mode} = 17$$

Age	Frequency
12	1
13	2
14	1
17	4
18	2

- 14.) Link has a jar of colored marbles: 5 blue, 7 yellow, and 9 green. Link selects one and it's yellow but doesn't put it back. What is the probability that Link will select another yellow marble?

$$30\%$$

- 15.) What is the measure of angle B to nearest tenth?

