Expressions

	Simplify. Justify by indicating the **property** used at each step.	Evaluate.
1.	$-3+2(x-4)-5x$ Justification : $-3+2x-8-5x$ Distributive Prop $-11-3x$ Combine Like Terms	2. $-2(x^2+1)+6x$ for x = 5 $-2(5^2+1)+6(5)$ -22

Equations

	Solve. Justify by indicating the **property** used at each step.		
3.	$-9x+18=23$ Justification : $\quad -18 \;-18$ Subtraction Prop of Eq. $\dfrac{-9x}{-9}=\dfrac{5}{-9}$ Division Prop of Eq. $x=-\dfrac{5}{9}$	4.	$\dfrac{5}{4}y-3=-8$ Justification : $\quad +3 \;\;+3$ Addition Prop of Eq. $4\bullet\dfrac{5}{4}y=-5\bullet4$ Multiplication Prop of Eq. $\dfrac{5y}{5}=\dfrac{-20}{5}$ Division Prop of Eq. $y=-4$

	Answer the questions completely		
5.	$-2(5-x^2)=22$ $-2(5-4^2)=22$ $-2(-11)=22$ $22=22$ When you plug in 4, the left side equals the right side.	Is x = 4 a solution? How do you know?	6. $-\left(\dfrac{x}{5}-6\right)+1=-8$ $-\left(\dfrac{-15}{5}-6\right)+1=-8$ $-(-9)+1=-8$ $10\neq-8$ When -15 is plugged in for x, the left side does not equal to -8.	Is x = -15 a solution? How do you know?

	In each case, a mistake has been made. Find and explain what the mistake was.		
7. $4+2(x-3)-5x=8$ $4+2x-3-5x=8$ The 2 was not distributed to the -3.	8. $4+2(x-3)-5x=8$ $6(x-3)-5x=8$ Addition before multiplication.	9. $4+2(x-3)-5x=8$ $4+2x-6-5x=8$ $-5x=8$ Like terms were not considered	

Inequalities

	Solve.	Label the number line **and** indicate the solution(s):	Is -7 a solution? **Explain how you know.**
10.	$-x-11>-3$ $x<-8$	(number line from -12 to 2, open circle at -8, shaded to the left) -12 -10 -8 -6 -4 -2 0 2	No, since it is not in the shaded region of the number line.

Absolute Value

	Solve.		Solve and Graph the Solution
11.	$-2\|x+3\|-5=-19$ $\|x+3\|=7$ $x+3=7 \qquad x+3=-7$ $x=4 \quad or \quad x=-10$	12.	$-2\|x+3\|\leq-10$ $\|x+3\|\geq5$ $x+3\geq5 \quad or \quad x+3\leq-5$ $x\geq2 \quad or \quad x\leq-8$

For row 12 graph:

A number line from before -10 to past 5, with marked points at -10, -5, 0, 5. Closed circles at $x=-8$ and $x=2$ with arrows extending left from -8 and right from 2.

Application

	Answer the questions completely.
13.	Jennifer is creating a rectangular plot of grass in her backyard. She would like the length of the plot to be 3 feet less than the width. Draw a picture of the situation. Rectangle labeled *w-3* on the left side and *w* on the bottom. Using the variable *w* for width, **express** the *perimeter* of the plot as an *inequality* if he would like the perimeter to be greater than 72 feet. $$4w-6>72$$
14.	Dan has \$400 in his account and he wants to rent a tractor to work on his field. The upfront cost is \$60 and \$40 for each day of rental. Create an **equation** to describe how many days he can rent the tractor. $60+40d=400$ Transform your equation for the number of rental days Dan into an equivalent equation. $d=\dfrac{400-60}{40}$ How many days can Dan rent a tractor for his \$400? 9 days

Essential Question

	Write a Big Idea response for the Essential Question. Include vocabulary terms you have learned. Your responses will be evaluated using the Big Ideas Scoring Guide.
15.	How can we represent real world situations in multiple ways? By drawing pictures, setting up algebraic expressions, graphing, etc