The Real Numbers	Date:
	Identify all sets of numbers to which each number belongs:

a. -4 **b.** $\sqrt{130}$ **c.** $-2\frac{1}{4}$ **d.** -18.2

e. π **f.** $-\sqrt{81}$ **g.** $\frac{20}{4}$ **h.** 0

Order of Operations	Date:
	Simplify the following:

1. $8 - |\text{-}6| + 3$ **2.** $1 + 2^4 \div (56 \div 7)$

3. $2[45 \div (11 - 8)^2] - 3$ **4.** $\dfrac{(4 - 13)^2 - 6}{25 \div 5} - |-2|$

Translating with Key Words	**Date:**
	Translate the following: 1. "one less than the quotient of a number and -5" 2. "three times the sum of a number and 7" 3. "the product of a number and -3, increased by 4 is 12" 4. "the difference of twice a number and 9 is -21" 5. "x is at most 6" 6. "You must be at least 18 years old to vote."

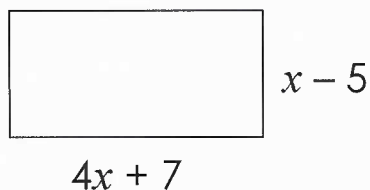| **Distribute/ Combine Like Terms**	**Date:**
	Simplify the following expressions: 1. $7(1 - 9k) - 5(4k + 7)$ 2. $10(x - 2) - (x - 4)$ 3. The dimensions of a rectangle are shown below. Use the formula $P = 2L + 2W$ to find its perimeter in simplest form. $x - 5$ $4x + 7$

Multi-Step Equations

Date:

Solve:

1. $6x + 30 - 15x + 6 = 18$

2. $-6(x - 1) = 108$

3. $-4(x + 2) - 3x = 20$

4. $3(x - 2) - (x + 5) = 17$

Multi-Step Inequalities

Date:

Solve and graph each solution:

1. $6x - 5 - 8x \leq -3$

2. $\dfrac{4x + 38}{-2} < 2x + 9$

3. $13 - (2x - 5) > 2(3x - 7)$

Number Word Problems	**Date:**
	1. The larger of two numbers is 7 less than twice the smaller number. If the sum of the numbers is 47, find both numbers.
	2. Find two consecutive numbers in which the sum of the integers is 149.
	3. Find three consecutive odd integers with a sum of 123.

More Word Problems	**Date:**
	1. The length of a rectangle is one more than five times its width. If the perimeter is 38, find the dimensions.
	2. For a fundraiser, Brad sold 2 less than 3 times the number of candy bars calls that Mary did. If they sold 334 total bars, find the number sold by each.

Proportions	Date:	
	Solve: **1.** $\dfrac{8}{6} = \dfrac{4}{x-7}$	**2.** $\dfrac{2x+6}{6} = \dfrac{9}{3}$
	3. $\dfrac{6}{x+1} = \dfrac{3}{x}$	**4.** $\dfrac{2}{6} = \dfrac{2n+8}{n-1}$

Absolute Value	Date:	
	Evaluate: **1.** $|-14|$	**2.** $|18|$
	3. $|-20| - |-17|$	**4.** $|10-16|$
	5. $|2-7|^2$	**6.** $2|c| + b$ (if c = -6, b = 8)

Power Rule	**Date:**	
	Simplify:	
	1. $(5a^4b^2)^3$	2. $(-xy^5)^2$
	3. $(-2p^7q^2)^5 \cdot (-3p^8q^4)^2$	4. $\left(\dfrac{4}{3}m^3n\right)^2 \cdot \dfrac{9}{20}mn^4$
	5. $(5x^2)(-x^2)^6(3x^2)^3$	6. $(-3a^6b^2)^3 + 12a^{18}b^6$

Quotient Rule	**Date:**	
	Simplify:	
	1. $\dfrac{5x^8}{20x^4}$	2. $\dfrac{63a^2b^4c^7}{-7a^2b^3c^5}$
	3. $\dfrac{(-x^5y^7)^2}{(2x^2y^3)^4}$	4. $\left(\dfrac{4m^5n^2}{6m^2n}\right)^3$
	5. Write a simplified expression to represent the length of a rectangle with a width of $9x^2y^2$ feet and an area of $72x^{12}y^6$ square feet.	

	Date:
Negative Exponents	**Simplify:**

Simplify:

1. $a^{-3}b^9 \cdot a^{-5}b^{-7}$

2. $6x^3y^2 \cdot (-2x^4y^{-5})$

3. $\dfrac{14a^{-6}}{21a^{-2}}$

4. $\dfrac{(x^{-3}y^4)^2}{x^5y}$

5. $\dfrac{18r^5s^2t}{6r^6s^2t^{-4}}$

6. $\dfrac{20p^{-7}q}{4p^{-2}q^9 \cdot -2p^5q^{-3}}$

Date:

Square and Cube Roots

Simplify the following square roots:

1. $\sqrt{196}$

2. $\sqrt{\dfrac{25}{4}}$

3. $\sqrt{96}$

4. $\sqrt{135}$

5. $\sqrt{640}$

6. $\sqrt{252}$

Simplify the following cube roots:

7. $\sqrt[3]{-8}$

8. $\sqrt[3]{216}$

9. $\sqrt[3]{81}$

10. $\sqrt[3]{-256}$