Today's Plan:

Learning Target (standard): I will solve literal equations and classify numbers in the number system.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, take notes over new material and complete practice problems over new concepts.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide examples of new concepts and assign students assessment problems over new concepts.

Assessment: Board work, homework check and homework assignment

Differentiation: Students will work at the board, go over and correct homework at their seats, actively engage in lecture over new concepts, practice new concepts with the aid of other students and the teacher and complete homework assignment.

p.48 #64-96 even

$64) x = 10$

$66) t = 6$

$68) x = 3$

$70) x = -\dfrac{50}{9}$

$72) x = -\dfrac{40}{17}$

$74) a = -\dfrac{5}{14}$

$76) x = -\dfrac{4}{17}$

$78) b = 25$

$80) x = \dfrac{7}{2}; 5$

$82) x = 18; 168$

$84) x = 2; 0$

$86) x = 3.5$

$88) p = -6.05$

$90) y = 60$

$92) 15° C$

$94) \$10.50$ per hour

$96) 6 members$

Solve:

$$6(3-5x)=6(3x+3)$$

$$18-30x=18x+18$$

$$-48x=0$$

$$x=0$$

Solve:

$$-6v-29=-2(1+3v)$$

$$-6v-29=-2-6v$$

$$-29\neq-2$$

no solution

Solve:

$$-\frac{3}{2}\left(\frac{8}{5}n+1\right)=\frac{3}{2}\left(\frac{11}{5}n+1\right)$$

$$\left[\frac{-24}{10}n-\frac{3}{2}=\frac{33}{10}n+\frac{3}{2}\right]10$$

$$-24n-15=33n+15$$

$$\frac{-57n}{-57}=\frac{30}{-57}$$

$$n=-\frac{10}{19}$$

The Number System:

- Natural numbers - the counting numbers
  i.e. 1,2,3,4,5,... $\mathbb{N}$

- Whole numbers - the natural numbers including 0
  i.e. 0,1,2,3,4,...

- Integers - the positive AND negative whole numbers

    i.e. ...,-3,-2,-1,0,1,2,3,...

- Rational numbers - numbers that can be written as fractions in the form of $^m/_n$, where m and n are integers

    i.e. $^3/_4$, .333333..., 1.25, 7

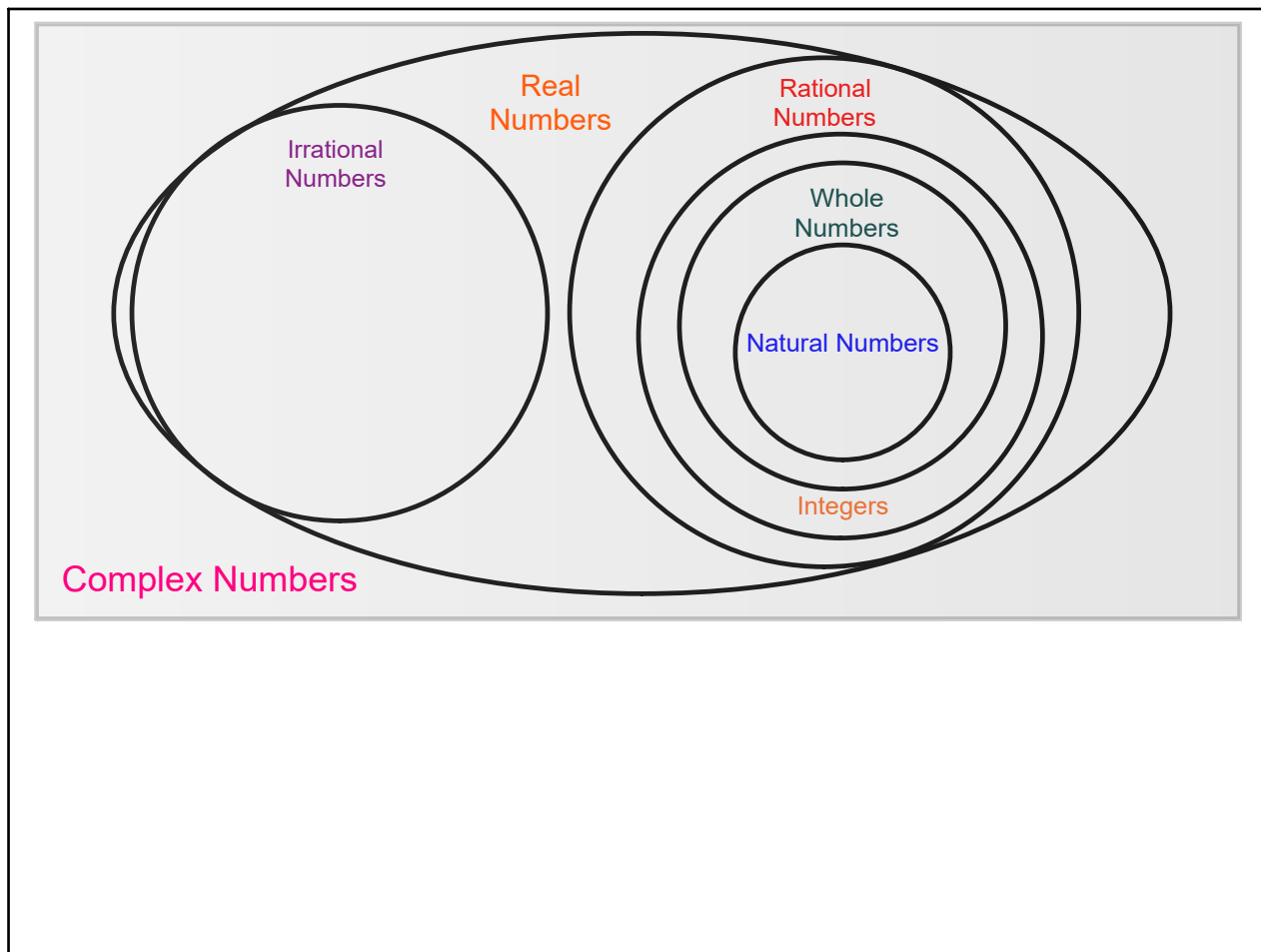
- Irrational numbers - numbers that cannot be written as a fraction

    i.e. $\sqrt{2}, \pi, 0.12345.....\sqrt[3]{12}$

- Real numbers - all of the above-mentioned numbers

- Complex numbers - numbers of the form a+bi, where a and b are real numbers, and i is the imaginary number

Solving Literal Equations:

Literal equations are equations that contain more than one variable

Suggestions for solving:

- Cross multiply or clear the fractions
- If the desired variable is in more than one quantity, distribute or factor as needed
- Isolate the term with the desired variable by adding or subtracting
- Isolate the desired variable by multiplying or dividing

$$A = \pi r^2$$
$$P = 2L + 2W$$

Solve for F :

$$C = \frac{5}{9}(F - 32)$$

$$\left[C = \frac{5}{9}F - \frac{160}{9} \right] 9$$

$$9C = 5F - 160$$
$$+160 \qquad +160$$

$$\frac{9C}{5} + \frac{160}{5} = \frac{5F}{5}$$

$$\frac{9}{5}C + 32 = F$$

$$F = \frac{9}{5}C + 32$$

Solve for P : $\widehat{GCF}$

$$A = P + Prt$$

$$\frac{A}{1+rt} = \frac{P(1+rt)}{1+rt}$$

$$\frac{A}{1+rt} = P$$

$$P = \frac{A}{1+rt}$$

Assignment:

Literal Equations Worksheet

#1-16