2.1 True/False Equations and Solution Sets

Name:_____

Corrective Assignment

Directions: Determine whether the following number sentences are true or false.			
1) $(4)3-(1)3=$ $(4-1)3$	2) $5(6)+2(3)=2(3)+5(6)$	3) $\frac{14}{8}=2.125$	4) $\frac{1}{3}+\frac{1}{4}=.5833$
Directions: Determine what value(s) for the given variable will make the following equations true.			
5) $(x-3)^2=25$	6) $\frac{x+2}{x^2+1}=\frac{6}{17}$	7) $g^2-5=-1$	
8) $-g^2=-9$	9) $4x-2=14$	8) $\frac{x}{5}+2=5$	

Directions: Describe the solution set.	
9) $x=-7$ Verbally: Graphically: Set Notation:	10) $f-6\neq-2$ Verbally: Graphically: Set Notation:
11) $y^2=25$ Verbally: Graphically: Set Notation:	12) $2q\leq-10$ Verbally: Graphically: Set Notation:
13) $3(x-2)=3x-6$ Verbally: Graphically: Set Notation:	14) $u+4=u+10$ Verbally: Graphically: Set Notation:

2.1 True/False Equations and Solution Sets

Corrective Assignment Answers

Directions: Determine whether the following number sentences are true or false.

1) $(4)3-(1)3=(4-1)3$

$9-3=(3)3$

$9=9$ TRUE

2) $5(6)+2(3)=2(3)+5(6)$

$30+6=6+30$

$36=36$ TRUE

3) $\frac{14}{8}=2.125$

$1.75=2.125$ FALSE

4) $\frac{1}{3}+\frac{1}{4}=.5833$ Repeats

$.58\overline{3}=.5833$ FALSE

Directions: Determine what value(s) for the given variable will make the following equations true.

5) $(x-3)^2=25$

$(\ )^2=25$

$-5=5^2=25$

$x-3=5$, $x=8$

$x-3=-5$, $x=-2$

6) $\frac{x+2}{x^2+1}=\frac{6}{17}$

$x+2=6$, $x=4$

$4^2+1=17$ ✓

7) $g^2-5=-1$

$g^2=4$

$(2)^2=4$ $(-2)^2=4$

$2, -2$

8) $-g^2=-9$

$g^2=9$

3 or -3

9) $4x-2=14$

$4(4)-2=14$

$x=4$

8) $\frac{x}{5}+2=5$

$+2=5$

$3+2=5$

$\frac{x}{5}=3$, $x=15$

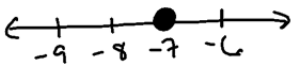
Directions: Describe the solution set.

9) $x=-7$

Verbally:

The solution set is -7.

Graphically:



Set Notation:

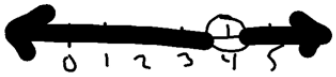
$\{-7\}$

10) $f-6\neq-2$

Verbally:

The solution set is all real numbers that don't equal 4.

Graphically:



Set Notation:

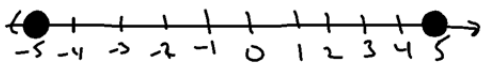
$\{f \text{ real} \mid f\neq 4\}$

11) $y^2=25$

Verbally:

The solution set is -5 or 5.

Graphically:



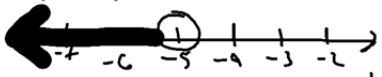
Set Notation: $\{-5,5\}$

12) $2q\leq-10$

Verbally:

The solution set is all real numbers such that q is less than -5.

Graphically:



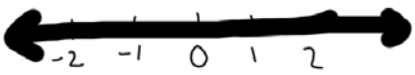
Set Notation: $\{q \text{ real} \mid q\leq -5\}$

13) $3(x-2)=3x-6$ $3x-6=3x-6$

Verbally:

The solution set is all real numbers.

Graphically:



Set Notation:

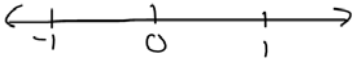
$\mathbb{R}$

14) $u+4=u+10$ $4=10$

Verbally:

The solution set is the null set.

Graphically:



Set Notation:

$\{\ \}$