Algebra II

1-3

Basic Properties of Real Numbers

Properties of Equality

Property	Description

Field Properties

Name	Addition	Multiplication

Closure

Determine whether the following set is closed under addition.

{ 0, 1 }

Determine whether the following set is closed under multiplication.

{ 0, 1 }

Simplify. (pg 17)

9) $2(a + 4) + (-8)$

Determine if each simplification is true or false.

11) $(-x + 6) + (-6 + x) = 0$

Name the property used in each step of the simplification.

17) $\frac{1}{2}(1 + 2t)$ _____

$= \frac{1}{2} \cdot 1 + \frac{1}{2} \cdot (2t)$ _____

$= \frac{1}{2} \cdot 1 + (\frac{1}{2} \cdot 2)t$ _____

$= \frac{1}{2} \cdot 1 + 1 \cdot t$ _____

$= \frac{1}{2} + t$ _____

23) Show that if $3x + (-12) = 0$, then $x = 4$ by justifying each indicated step

$3x + (-12) = 0$	Given
$[3x + (-12)] + 12 = 0 + 12$	a)
$3x + [(-12) + 12] = 0 + 12$	b)
$3x + 0 = 0 + 12$	c)
$3x = 12$	d)
$\frac{1}{3}(3x) = \frac{1}{3}(12)$	e)
$\frac{1}{3}(3x) = 4$	
$(\frac{1}{3} \cdot 3)x = 4$	f)
$1 \cdot x = 4$	g)
$x = 4$	h)

Assignment:
pg 17
2-32 even

or

Assignment:
pg 17
Day 1:
1-16 all
25-33 all
Day 2:
17-24 all