September 15, 2015

* Quiz #6 - Tomorrow
1.1 — 1.7

Multiplication of Integers

① Same "Signs" then the result is always Positive.

② Opposite "signs" the result is always negative.

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① + · + = +
− · − = +

5 · 3 = +15

−5 · −3 = +15 ?

Neg times a Neg is a Positive

3 · 3 = 9
3 · 2 = 6
3 · 1 = 3
3 · 0 = 0
3 · (−1) = −3
3 · (−2) = −6
3 · (−3) = −9

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−3 · 3 = −9
−3 · 2 = −6
−3 · 1 = −3
−3 · 0 = 0
−3 · (−1) = 3
−3 · (−2) = 6
−3 · (−3) = 9

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Proof: That a Neg times a Neg is a Positive.

Let a & b be any two Real numbers

Let $x = ab + (-a)b + (-a)(-b)$

① $x = ab + (-a)(b) + (-a)(-b)$
$x = ab - a(b + (-b))$ Dist
$x = ab - a(0)$
$x = ab$

② $x = ab + (-a)(b) + (-a)(-b)$
$x = b(a + (-a)) + (-a)(-b)$
$x = b(0) + (-a)(-b)$
$x = (-a)(-b)$

Therefore, ① $x = x$
② $x = ab$
③ $x = (-a)(-b)$

$ab = (-a)(-b)$
Positive

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Fractions

① Fundamental Principal of Fractions

$\frac{a}{b}$

a & b are Real numbers and $b \neq 0$

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$\frac{5}{0}$ undefine! of Some whole

$\frac{3}{4}$ of $\frac{1}{4}\ \frac{1}{4}\ \frac{1}{4}\ \frac{1}{4} = \frac{4}{4} = 1$

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