**Quiz #1**
**Intermediate Algebra**
**Fall 2015**
***University of North Georgia***

**Name:** Key **Date:** August 21, 2015

Use the ***Fundamental Principle of Fractions*** **(FPF)** to do questions #1 and #2. **Note: You MUST show the detailed use of the FPF for full credit!**

**Simplify**

**1.** $\frac{11}{3} - \frac{5}{11}$ LCD: 33

$\frac{11}{3} \cdot \frac{11}{11} = \frac{121}{33}$

$\frac{5}{11} \cdot \frac{3}{3} = \frac{15}{33}$

$\frac{121 - 15}{33} = \boxed{\frac{106}{33}}$

**2.** $\frac{3+\frac{1}{4}}{\frac{2}{7}-5}$ $= \frac{\frac{12+1}{4}}{\frac{2-35}{7}} = \frac{\frac{13}{4}}{-\frac{33}{7}}$

$= \frac{13}{4} \cdot -\frac{7}{33} = \boxed{-\frac{91}{132}}$

**Solve the equation.**

3. $-3(4t-5)+2t=t+2(t-1)-8$

$-12t+15+2t = t+2t-2-8$

$-10t+15 = 3t-10$

$-13t = -25$

$$t = \frac{25}{13}$$

Check

$-3\left(4\left(\frac{25}{13}\right)-5\right)+2\left(\frac{25}{13}\right) = \frac{25}{13}+2\left(\frac{25}{13}-1\right)-8$

$-3\left(\frac{100}{13}-5\right)+\frac{50}{13}$

$-3\left(\frac{100-65}{13}\right)+\frac{50}{13}$

$-3\left(\frac{35}{13}\right)+\frac{50}{13}$

$-\frac{105}{13}+\frac{50}{13}$

$\frac{-105+50}{13}$

$-\frac{55}{13}$

$= \frac{25}{13}+2\left(\frac{25-13}{13}\right)-8$

$= \frac{25}{13}+2\left(\frac{12}{13}\right)-8$

$= \frac{25}{13}+\frac{24}{13}-8$

$= \frac{49}{13}-8$

$= \frac{49-104}{13}$

$= -\frac{55}{13}$ ✓