Do #1 and #6 together,
* choice of 1 (2-5) * choice of 3 (7-10) * choice of 5 on back (have to do #16 as one of their 5)

Kuta Software - Infinite Algebra 1

Name Key

Date _____ Period ____

Solving Proportions

Solve each proportion.

1) $\frac{10}{8}=\frac{n}{10}$

$\frac{8n}{8}=\frac{100}{8}$

$n = 12.5$

2) $\frac{7}{5}=\frac{x}{3}$

$\frac{21}{5}=\frac{5x}{5}$

$4\frac{1}{5} = x$

$4.2 = x$

3) $\frac{9}{6}=\frac{x}{10}$

$\frac{90}{6}=\frac{6x}{6}$

$15 = x$

4) $\frac{7}{n}=\frac{8}{7}$

$\frac{49}{8}=\frac{8n}{8}$

$6\frac{1}{8} = n$

$6.13 = n$

5) $\frac{4}{3}=\frac{8}{x}$

$\frac{4x}{4}=\frac{24}{4}$

$x = 6$

6) $\frac{7}{b+5}=\frac{10}{5}$

$35 = 10(x+5)$ OR

$35 = 10x+50$

$-50 \quad -50$

$-15 = 10x$

$\frac{-15}{10}=\frac{10x}{10}$

$-\frac{3}{2} = x$ $\quad -1.5 = x$

$5(x+5)\ \frac{7}{x+5}=\frac{10}{5}\ 5(x+5)$

$35 = 10(x+5)$

$35 = 10x+50$

7) $\frac{6}{b-1}=\frac{9}{7}$

$42 = 9(x-1)$

$42 = 9x-9$

$+9 \quad +9$

$51 = 9x$

$\frac{51}{9}=\frac{9x}{9}$

$5\frac{6}{9} = x$ $\quad 5.67 = x$

8) $\frac{4}{m-8}=\frac{8}{2}$

$8 = 8(m-8)$

$8 = 8m-64$

$+64 \quad +64$

$72 = 8m$

$\frac{72}{8}=\frac{8m}{8}$

$9 = m$

9) $\frac{5}{6}=\frac{7n+9}{9}$

$45 = 6(7n+9)$

$45 = 42n+54$

$-54 \quad -54$

$-9 = 42n$

$\frac{-9}{42}=\frac{42n}{42}$

$-0.21 = n$ $\quad n = -\frac{3}{14}$

10) $\frac{4}{9}=\frac{r-3}{6}$

$24 = 9(r-3)$

$24 = 9r-27$

$+27 \quad +27$

$51 = 9r$

$\frac{51}{9}=\frac{9r}{9}$

$5.67 = r$ $\quad 5\frac{6}{9} = r$

11) $\frac{7}{9}=\frac{b}{b-10}$

$7(x-10)=9x$

$7x-70=9x$

$-7x \quad -7x$

$\frac{-70}{2}=\frac{2x}{2}$

$-35=x$

12) $\frac{9}{k-7}=\frac{6}{k}$

$9k=6(k-7)$

$9k=6k-42$

$-6k \quad -6k$

$\frac{3k}{3}=\frac{-42}{3}$

$k=-14$

13) $\frac{4}{n+2}=\frac{7}{n}$

$4n=7(n+2)$

$4n=7n+14$

$-7n \quad -7n$

$\frac{-3n}{-3}=\frac{14}{-3}$

$n=-\frac{14}{3}$

14) $\frac{n}{n-3}=\frac{2}{3}$

$3n=2(n-3)$

$3n=2n-6$

$-2n \quad -2n$

$n=-6$

15) $\frac{x-3}{x}=\frac{9}{10}$

$10(x-3)=9x$

$10x-30=9x$

$-10x \quad -10x$

$(-1)-30=-x(-1)$

$30=x$

Have to do

16) $\frac{5}{r-9}=\frac{8}{r+5}$

$5(r+5)=8(r-9)$

$5r+25=8r-72$

$-5r \quad -5r$

$25=3r-72$

$+72 \quad +72$

$\frac{97}{3}=\frac{3r}{3}$

$32.33=r$ $\quad 32\frac{1}{3}=r$

17) $\frac{p+10}{p-7}=\frac{8}{9}$

$9(p+10)=8(p-7)$

$9p+90=8p-56$

$-8p \quad -8p$

$p+90=-56$

$-90 \quad -90$

$p=-146$

18) $\frac{2}{8}=\frac{n+4}{n-4}$

$2(n-4)=8(n+4)$

$2n-8=8n+32$

$-2n \quad -2n$

$-8=6n+32$

$-32 \quad -32$

$\frac{-40}{6}=\frac{6n}{6}$

$-6.67=n$

$-6\frac{4}{6}=n$

19) $\frac{n-5}{n+8}=\frac{2}{7}$

$7(n-5)=2(n+8)$

$7n-35=2n+16$

$+35 \quad +35$

$7n=2n+51$

$-2n \quad -2n$

$\frac{5n}{5}=\frac{51}{5}$

$n=10\frac{1}{5}$ $\quad n=10.2$

20) $\frac{n-6}{n-7}=\frac{9}{2}$

$2(n-6)=9(n-7)$

$2n-12=9n-63$

$+12 \quad +12$

$2n=9n-51$

$-9n \quad -9n$

$\frac{-7n}{-7}=\frac{-51}{-7}$

$n=7.29$ $\quad n=7\frac{2}{7}$