Name: KEY

11.8 Review

1) Solve the following linear equation: $\frac{2}{3}x+\frac{1}{5}=2x-\frac{3}{10}$ (30)

$20x+6=60x-9$

$15=40x$

$\frac{15}{40}=\frac{40x}{40}$

$\frac{3}{8}$

2) Find the least common denominator

a) $\frac{5}{9},\frac{6}{x},\frac{7}{2x}$ $18x$

b) $\frac{2}{5},\frac{4}{x}$ $5x$

c) $\frac{7}{5x+10},\frac{x}{x+2}$ $5(x+2)$

$5(x+2)$

Solve each equation

3) $\frac{x}{4}-\frac{5}{x}=\frac{1}{4}$ (4x)

$x^2-20=4x$

$x^2-4x-20=0$

$(x-5)(x+4)=0$

$-4, 5$

4) $10-x=\frac{25}{x}$ (x)

$10x-x^2=25$

$0=x^2-10x+25$

$0=(x-5)^2$

5

5) $\frac{2}{3}=\frac{7}{3x-12}-\frac{1}{x-4}$ (3(x-4))

$3(x-4)$

$2(x-4)=7-3$

$2x-8=4$

$2x=12$

$x=6$

6) $\frac{x}{x+4}=\frac{4}{x+4}+2$ ((x+4))

$x=4+2(x+4)$

$x=12+2x$

$-x=12$

$x=-12$

7) If the LCD of an equation was $12x^2$, give six possible denominators that could be in the equation.

$3x, 12x^2, 4x, 6x, 6x^2, 1$, etc...

8) ***Batting Averages*** You have had 28 hits in 112 times at bat. Your batting average is $\frac{28}{112} = 0.250$. How many consecutive hits must you get to increase your batting average to 0.300?

$.300=\frac{28+x}{112+x}$

$.300(112+x)=28+x$

$33.6+.3x=28+x$

$5.6=.7x$

$8=x$

9) ***Test Averages*** You have taken 3 tests and have an average of 70 points. If you score 90 points on the rest of your tests, how many more tests do you need to take to raise your average to 80?

$80=\frac{210+90x}{3+x}$

$240+80x=210+90x$

$30=10x$

$x=3$