Solve.

$$15\left(\frac{2}{5}c-2\right)=\left(\frac{7}{3}\right)15$$

Multiply both sides of the equation by the LCM of 5 and 3 which is 15. Then finish solving for x.

$6c-30=35$

$+30 \quad +30$

$\frac{6c}{6}=\frac{65}{6}$

$c=65/6$

or

Get all terms to have the same denominator then cancel the denominators and finish solving for x.

$$\frac{3}{3}\cdot\frac{2}{5}c-\frac{2}{1}\cdot\frac{15}{15}=\frac{7}{3}\cdot\frac{5}{5}$$

$\frac{6}{15}c-\frac{30}{15}=\frac{35}{15}$

$6c-30=35$

$+30 \quad +30$

$\frac{6c}{6}=\frac{65}{6}$

$c=\frac{65}{6}$

Solving problems involving "many" fractions.

1. Solve. $11\left(\frac{3}{11}x+\frac{5}{11}\right)=\left(\frac{18}{11}\right)11$

Multiply both sides of the equation by 11 and finish solving for x.

$3x+5=18$

$-5 \quad -5$

$\frac{3x}{3}=\frac{13}{3}$

2. Solve. $15\left(\frac{8}{5}+\frac{7}{15}x\right)=\left(\frac{2}{3}\right)15$

The LCM of 5, 15 and 3 is 15. Multiply both sides of the equation by 15 and finish solving for x.

$24+7x=10$

$-24 \quad -24$

$\frac{7x}{7}=\frac{-14}{7}$

$x=-2$

Solve.

$21\left(\frac{5}{3}+\frac{6}{7}x\right)=(2)21$

The LCM of 3 and 7 is 21. Multiply both sides of the equation by 21 and finish solving for x.

$35+18x=42$

$-35 \quad -35$

$18x=7$

$x=\frac{7}{18}$

Solve.

$48\left(\frac{11}{12}W-\frac{21}{16}\right)=\left(\frac{7}{8}\right)48$

The LCM of 8, 12, and 16 is 48. Multiply both sides of the equation by 48 and finish solving for x.

$44w-63=42$

$+63 \quad +63$

$\frac{44w}{44}=\frac{105}{44}$

You can now finish Hwk #10

Sec 2-3 due tomorrow

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Problems 21-27

Find the exact solution to this equation.

$\frac{12}{12}\cdot\left(\frac{8}{5}\right)+\frac{5}{5}\left(\frac{19}{12}x\right)=\left(\frac{7}{4}\right)\cdot\frac{15}{15}$

$\frac{96}{96}+\frac{95}{96}x=\frac{105}{96}$

$96+95x=105$

$-96 \quad -96$

$95x=9$

$x=\frac{9}{95}$

Solve.

$$44\left(\frac{5}{4}\right)=\left(\frac{B}{11}\right)44$$

$$\frac{55}{4}=\frac{4B}{4}$$

$$B=\frac{55}{4}$$

Or Cross Multiply

$B = 5 \cdot 11 \div 4$

$B = \frac{55}{4}$

You were given $100 for your birthday and plan to save $10 a week.

$100 + 10w$ w = #wks

Your brother sold his bike for $350 and planed to save $5 a week.

$350 + 5w$

In how many weeks will the two of you have the same amount of money?

$100 + 10w = 350 + 5w$

$-5w \quad -5x$

$100 + 5w = 350$

$-100 \quad -100$

$\frac{5w}{5} = \frac{250}{5}$

$w = 50$ wks

Equations with variables on Both Sides of the equal sign:

- Simplify each side first. Use Distributive Property if necessary.
- Move all the variables to one side of the equation.
- Solve.

Solve.

$$4x - 3 = 7x + 14 - 5x + 1$$

$4x - 3 = 2x + 15$

$-2x \quad -2x$

$2x - 3 = 15$

$+3 \quad +3$

$\frac{2x}{2} = \frac{18}{2}$

$x = 9$

Solve.

$2x = 12 + 4x$

$-4x \quad -4x$

$-2x = 12$

$\frac{-2x}{-2} = \frac{12}{-2}$ ÷ −2

$x = -6$

OR

$2x = 12 + 4x$

$-2x \quad -2x$

$0 = 12 + 2x$

$-12 \quad -12$

$\frac{-12}{2} = \frac{2x}{2}$

$-6 = x$