Turn to page 28

p 28

2-4 Solving Multi-Step Equations

Examples:

There are two methods for solving an equation with more than one fraction:

Method 1: Adding Fractions by getting common denominators.

$$\frac{2x}{3}+\frac{x}{2}=7$$

Step 1 find equivalent fractions
Step 2 combine like terms (3x, 4x)
Step 3 multiply by reciprocal
Step 4 _____

Method 2: Multiplying numerators to clear the fractions.

$$\frac{2x}{3}+\frac{x}{2}=7$$

Step 1 Mult. b.s. by C.D.
Step 2 distribute
Step 3 SOLVE
Step 4 _____

Check

√ Understanding Check

Solve each equation:

a. $\frac{1}{4}x+2=\frac{3}{4}x$ · 4

$x+8=3x$

$8=2x$

$4=x$

b. $\frac{1}{2}+4m=3m-\frac{5}{2}$ · 2

$1+8m=6m-5$

$2m=-6$

$m=-3$

c. $\frac{m}{4}+\frac{m}{2}=\frac{5}{8}$ · 8

$2m+4m=5$

$6m=5$

$m=5/6$

d. $\frac{2}{3}x-\frac{5}{8}x=26$ · 24

$16x-15x=624$

$x=624$

e. $\frac{2}{7}x+\frac{1}{2}x=\frac{3}{4}x+1$ · 28

$8x+14x=21x+28$

$22x=21x+28$

$x=28$

f. $\frac{4}{5}x-\frac{3}{4}x=\frac{3}{10}x-1$ · 20

$16x-15x=6x-20$

$x=6x-20$

$20=5x$

$4=x$

a. x = 4	b. m = -3	c. m = 5/6
d. x = 624	e. x = 28	f. x = 4