

April 30

Equations with fractions & decimals

Ex 1  $\frac{40}{5} \left[ \frac{1}{8} (5+7x) \right] - \frac{40}{4} \left[ \frac{3}{10} (5+x) \right] = [2] 40$

$$5(5+7x) - 12(5+x) = 80$$

$$25 + 35x - 60 - 12x = 80$$

$$23x - 35 = 80$$

$$23x = 115$$

$$x = 5$$

CK

$$\frac{1}{8}(40) - \frac{3}{10}(40) = 5 - 3 = 2$$

Ü 2

$$1.6(3x-1)+2=5x$$

$$4.8x-1.6+2=5x$$

$$4.8x+.4=5x$$

$$.4=.2x$$

$$2=x$$

$$10 \left( 1.6(3x-1) + 2 \right) = (5x)_{10}$$

$$16(3x-1)+20=50x$$

$$48x-16+20=50x$$

$$4=2x$$

$$2=x$$

## SPECIAL CASES

Ex 3

$$3(x-8) = 6x - 3(x-8)$$

$$3x - 24 = 6x - 3x + 24$$

$$3x - 24 = 3x + 24$$

$$-24 = 24$$

$$0 = 48 \text{ False}$$

no solution

Ex 4

$$2x - 14 = 4x - 2(x + 7)$$

$$2x - 14 = 4x - 2x - 14$$

$$2x - 14 = 2x - 14$$

$$-2x + 14 = -2x + 14$$

$$0 = 0 \text{ True}$$

all real #s