Solve Using Balance Strategies

1. $\frac{2}{3}b = 8$ (×3)

$\frac{2b}{2} = \frac{24}{2}$

$b = 12$

2. $3x + \frac{2}{7} = -2$ (×7)

$21x + 2 = -14$ (−2)

$\frac{21x}{21} = \frac{-16}{21}$

$x = -\frac{16}{21}$

3. $15.5 - 4x = 7.2$ (−15.5)

$\frac{-4x}{-4} = \frac{-8.3}{-4}$

$x = \frac{8.3}{4}$

$= 2.075$

4. $2(3x + 7) = -5$

$6x + 14 = -5$ (−14)

$\frac{6x}{6} = \frac{-19}{6}$

$x = -\frac{19}{6}$

5. $2(5 - 3x) = 4.5$

$10 - 6x = 4.5$ (−10)

$\frac{-6x}{-6} = \frac{-5.5}{-6}$

$x = 0.91\overline{6}$

(10) (10)

$10 - 6x = 4.5$ (−100)

$100 - 60x = 45$

$\frac{-60x}{-60} = \frac{-55}{-60}$

$x = \frac{11}{12}$

6. $5 - \frac{x}{3} = 7$ (−5)

$(-3)\frac{x}{-3} = 2(-3)$

$x = -6$

Write the equation then solve.

a) Triple a number, subtracted by 2 is 16

$3x - 2 = 16$

$+2 \quad +2$

$\frac{3x}{3} = \frac{18}{3}$

$x = 6$

b) Two plus a number all divided by 6 is 4.5

$(6)\frac{2+x}{6} = 4.5(6)$

$-2 \quad -2$

$2 + x = 27$

$x = 25$

c) Seven, subtract a number divided by 2 is 11

$-7 \quad -7$

$7 - \frac{x}{2} = 11$

$\frac{x}{2} = 4(-2)$

$(-2)x$

-2

$x = -8$

① $7 - 6x = 85$

$-7 \quad -7$

$\frac{-6x}{-6} = \frac{78}{-6}$

$x = -13$

② $\frac{-6x}{4} + 7 = \frac{4}{5}$ $(20) \quad (20) \quad (20)$

$-140 \quad -140$

$-30x + 140 = 16$

$\frac{-30x}{-30} = \frac{-124}{-30}$

$x = \frac{62}{15}$

(3) $10x + 4 = -2x - 32$

$+2x \quad +2x$

$12x + 4 = -32$

$-4 \quad -4$

$\frac{12x}{12} = \frac{-36}{12}$

$x = -3$

(4) $6(x-3) = 30$

$6x - 18 = 30$

$+18 \quad +18$

$\frac{6x}{6} = \frac{48}{6}$

$x = 8$

$\frac{6(x-3)}{6} = \frac{30}{6}$

$x - 3 = 5$

$+3 \quad +3$

$x = 8$

(5) $\frac{2}{3}(x+3) = 5(x-1)$

$(3) \quad (3) \quad (3)$

$2x + 6 = 15x - 15$

$-15x \quad -15x$

$-13x + 6 = -15$

$-6 \quad -6$

$\frac{-13x}{-13} = \frac{-21}{-13}$

$x = \frac{21}{13}$

Concept reinforcement

From last day...
Page 281-282 6, 8a, 9, 10 - 15, 17

New work...
Page 282-283 18, 19, 21

#21 for Homework

Quiz tomorrow

10.e) $-20.5-2.2b=-7.2b$ (+2.2b, +2.2b)

$-20.5=-5.0b$

$-5.0 \quad -5.0$

$4.1=b$

LS	RS
$-20.5-2.2b$	$-7.2b$
$-20.5-2.2(4.1)$	$-7.2(4.1)$
$-20.5-9.02$	-29.52
-29.52	

LS=RS ∴ b=4.1