

## Solving Using Balance Strategies

example 1

$$6x + 2 = 10 + 4x$$

$$2x + 2 = 10$$

$$\frac{2x}{2} = \frac{8}{2}$$

$$x = 4$$

LS	RS
$6x + 2$	$10 + 4x$
$6(4) + 2$	$10 + 4(4)$
$24 + 2$	$10 + 16$
$26$	$26$

$$LS = RS \therefore x = 4$$

Try this...

$$-3c + 7 = 2c - 8$$

$$-5c + 7 = -8$$

$$\frac{-5c}{-5} = \frac{-15}{-5}$$

$$c = 3$$

LS	RS
$-3c + 7$	$2c - 8$
$-3(3) + 7$	$2(3) - 8$
$-9 + 7$	$6 - 8$
$-2$	$-2$

$$LS = RS \therefore c = 3$$

example 2

$$(r) \frac{122}{r} = 3, r \neq 0$$

$$\frac{122}{3} = \frac{3r}{3}$$

$$40.\bar{6} = r$$

example 3

$$(15) \frac{2a}{3} = \frac{4a}{5} + 7(15)$$

$$10a = 12a + 105$$

$$\frac{-2a}{-2} = \frac{105}{-2}$$

$$a = -52.5$$

LS	RS
$\frac{2a}{3}$	$\frac{4a}{5} + 7$
$\frac{2(-52.5)}{3}$	$\frac{4(-52.5)}{5} + 7$
$-\frac{105}{3}$	$-\frac{210}{5} + 7$
$-35$	$-42 + 7$
	$-35$

$$LS = RS. \therefore a = -52.5$$

Try this...

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

$$2x + x = 24$$

$$\frac{3x}{3} = \frac{24}{3}$$

$$x = 8$$

$${}^{(8)}\frac{x}{2} + {}^{(8)}\frac{x}{4} = 6^{(8)}$$

$$4x + 2x = 48$$

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

$$x = 8$$

Finish...

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9, 10 a,d,f, 11,13-17,18 a,c,e

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19-22, 24 a,b,c

