

Warm up
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February 2

Solve and verify the following equations

1.  $5x = 25$

$$\frac{5x}{5} = \frac{25}{5}$$

$$x = 5$$

LS	RS
$5x$	$25$
$5(5)$	
$25$	

$LS = RS \therefore x = 5$

2.  $x - 4 = 13$

$$x - 4 + 4 = 13 + 4$$

$$x = 17$$

LS	RS
$x - 4$	$13$
$17 - 4$	
$13$	

$LS = RS \therefore x = 17$

3.  $2x - 3 = 12$

$$2x - 3 + 3 = 12 + 3$$

$$\frac{2x}{2} = \frac{15}{2}$$

$$x = \frac{15}{2}$$

LS	RS
$2x - 3$	$12$
$2\left(\frac{15}{2}\right) - 3$	
$15 - 3$	
$12$	

$LS = RS \therefore x = \frac{15}{2}$

New work...

$$2(4x + 5) = 18$$

$$8x + 10 = 18$$

$$8x + 10 - 10 = 18 - 10$$

$$8x = 8$$

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

$$x = 1$$

LS	RS
$2(4(x)+5)$	18
$2(4(1)+5)$	
$2(9)$	
18	
$LS = RS \therefore x = 1$	

$$\frac{2(4x + 5)}{2} = \frac{18}{2}$$

$$4x + 5 = 9$$

$$4x + 5 - 5 = 9 - 5$$

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

$$x = 1$$

LS	
see above	

try this...

$$\frac{3(t-4)}{3} = \frac{8}{3}$$

$$3(t-4) = 8$$

$$3t - 12 = 8$$

$$3t - 12 + 12 = 8 + 12$$

$$\frac{3t}{3} = \frac{20}{3}$$

$$t = \frac{20}{3}$$

LS	RS
$3(t-4)$	8
$3\left(\frac{20}{3} - 4\right)$	
$3\left(\frac{20}{3} - \frac{12}{3}\right)$	
$3\left(\frac{8}{3}\right)$	
8	

$$LS = RS \therefore t = \frac{20}{3}$$

## Homework

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$$\begin{aligned} 18a) \quad & 5(x-7) = -15 \\ & 5x - 35 = -15 \\ & 5x - 35 + 35 = -15 + 35 \\ & 5x = 20 \\ & \frac{5x}{5} = \frac{20}{5} \\ & x = 4 \end{aligned}$$

LS	RS
$5(x-7)$	$-15$
$5(4-7)$	
$5(-3)$	
$-15$	

LS = RS  $\therefore x = 4$