I can solve equations and justify the steps used when solving the equations

Solving Equations

Let's make sure we can solve and check some of these basic equations

$$\frac{2x}{5}+8=12$$

Check:

$$-3x+5+9x=41$$

Check:

$12x+8=2x-17$ Check:

$2(2x-5)=5(5+x)$ Check:

I can solve equations and justify the steps used when solving the equations

Solving Equations

Let's make sure we can solve and check some of these basic equations

$$\frac{2x}{5} + 8 = 12$$

$-8 \quad -8$

$$\frac{2x}{5} = 4 \cdot 5$$

$$\frac{2x}{2} = \frac{20}{2}$$

$$x = 10$$

Check:

F: $\frac{2x}{5} + 8 = 12$

S: $\frac{2 \cdot 10}{5} + 8 = 12$

$\frac{20}{5} + 8$

S: $4 + 8$

$12 = 12$ ✓

$$-3x + 5 + 9x = 41$$

$6x + 8 = 41$

$-5 \quad -5$

$$6x = 36$$

$$x = 6$$

Check:

F: $-3x + 5 + 9x = 41$

S: $-3(6) + 5 + 9(6) = 41$

$-18 + 5 + 54 = 41$

$41 = 41$ ✓

$12x+8=2x-17$

$-2x \quad -2x$

$10x+8=-17$

$-8 \quad -8$

$\frac{10x}{10}=\frac{-25}{10}$

$\boxed{x=-2.5}$

Check:

F: $12x+8=2x-17$

S: $12(-2.5)+8=2(-2.5)-17$

S: $-22=-22$ ✓

$2(2x-5)=5(5+x)$

$4x-10=25+5x$

$-4x \quad -4x$

$-10=25+x$

$-25 \quad -25$

$-35=x$

Check:

F: $2(2x-5)=5(5+x)$

S: $2(2(-35)-5)=5(5+(-35))$

$2(-70-5)$ $\quad 5\cdot(-30)$

$2\cdot(-75)$ $\quad -150$

$-150=-150$ ✓