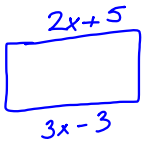
5.3 Variables on Both sides

Rectangle



$+3 \quad 2x+5=3x-3+3$

$3+2x+5=3x$

$2x+8=3x$

$-2x \quad -2x$

$8=x$

When variables are on both sides....

- Get all variables to one side
- Get all constants to the other side
- Solve for variable

$2x=5x-3$

$-5x \quad -5x$

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

$x=1$

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

$+7 \quad +7$

$2(x-3)+12=4x$

$2x-6+12=4x$

$-2x \quad -2x$

$-6+12=2x$

$\frac{6}{2}=\frac{2x}{2}$

$3=x$

Distance formula

(Not the geometric)

$D=r\cdot t$

Bob leaves Stephen at 7:00 driving 60mph

John leaves Stephen at 8:00 driving 80mph

Create 2 distance problems with t being the common time

$B: D=60t \quad J: D=80(t-1)$

$60t=80(t-1)$

$60t=80t-80$

$-80t \quad -60t$

$-20t=-80$

$t=4$