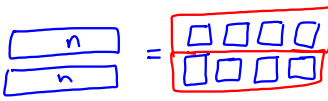2.4 Solving Equations
by Balancing
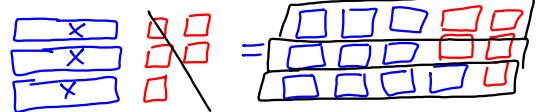
Equal Parts
on both sides

$2n = 8$
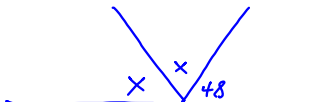

$n = 4$

$2x + 3 = 13$

$x = 5$

$3x - 5 = 10$

$x = 5$

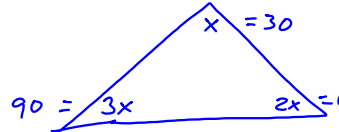---

$2x + 48 = 180$ take away 48

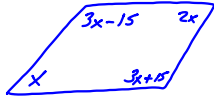$2x = 132$ 2 groups of

$x = 66$

$x = 30$

$90 = 3x$ $2x = 60$

$6x = 180$ 6 groups

$x = 30$

$$3x - 15 + 2x + 3x + 15 + x = 360$$
$$9x = 360 \quad 9 \text{ groups}$$
$$x = 40$$

Perimeter of a Trapezoid is 33 cm. Three sides have are the same length. The fourth side is 9cm. How long are the other sides?

$$3x + 9 = 33 \quad \text{take away } 9$$
$$3x = 24 \quad 3 \text{ groups}$$
$$x = 8 \quad 8 \text{ cm}$$