5.5 Rewriting Equations for Different Variables

Taking formulas and solving for other variables than the original

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Area of Rectangle
solve for width

$$\dfrac{A}{\ell} = \dfrac{\ell \cdot w}{\ell} \quad \text{divide by } \ell$$

$$\dfrac{A}{\ell} = w$$

In rewriting we treat all variables other than the one we are solving for like numbers

add, subtract, multiply, divide

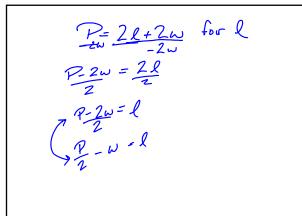
$$\dfrac{C}{2\pi} = \dfrac{2\pi r}{2\pi} \quad \text{for } r$$

$$\dfrac{C}{2\pi} = r$$

$$y = mx + b \quad \text{for } b$$
$$-mx \quad -mx$$

$$y - mx = b$$

$$\dfrac{V}{\ell \cdot h} = \dfrac{\ell \cdot w \cdot h}{\ell \cdot h} \quad \text{for } w$$

$$\dfrac{V}{\ell \cdot h} = w$$

$$\frac{P = 2l + 2w}{-2w} \quad \text{for } l$$

$$\frac{P - 2w}{2} = \frac{2l}{2}$$

$$\frac{P - 2w}{2} = l$$

$$\frac{P}{2} - w = l$$

There is an 6% tax on all items sold at Clark

T = total sold with sales tax

$$T = t + 0.06t$$

$$T = 1.06t$$