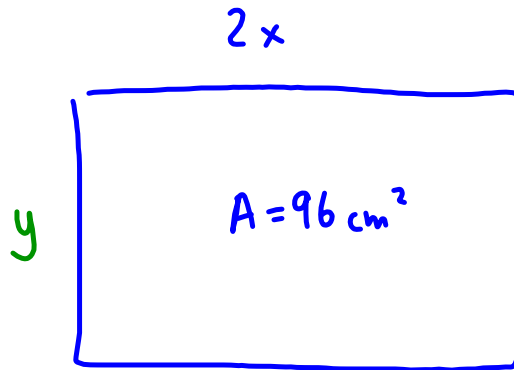
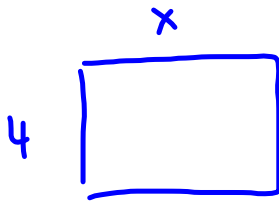


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#8.



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

$$y = 2(4 \text{ cm}) = 8 \text{ cm}$$

$$P = 2(12 + 8) \text{ cm} \\ = 40 \text{ cm}$$

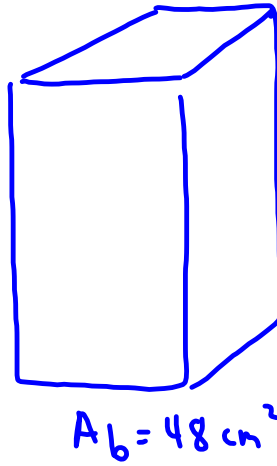
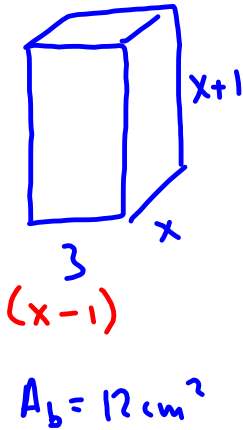
$$A = 2x(8 \text{ cm})$$

$$96 \text{ cm}^2 = 16x$$

$$\frac{96}{16} = x$$

$$x = 6 \text{ cm}$$

#9.



$$k^2 = \frac{48 \text{ cm}^2}{12 \text{ cm}^2} = 4$$

$$k = 2$$

$$k^3 = 2^3 = 8$$

$$3x = 12$$

$$x = 4 \text{ cm}$$

$$\begin{aligned} V_s &= 3 \text{ cm} (4 \text{ cm}) (5 \text{ cm}) \\ &= 60 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} V_b &= 60 \text{ cm}^3 \cdot 8 \\ &= 480 \text{ cm}^3 \end{aligned}$$

Harder:

$$(x-1)x = 12$$

$$x^2 - x = 12$$

$$x^2 - x - 12 = 0$$

$$x^2 - 4x + 3x - 12 = 0$$

$$x(x-4) + 3(x-4) = 0$$

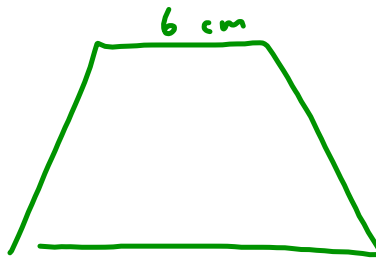
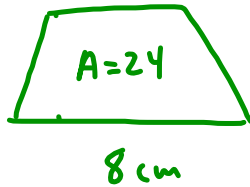
$$(x-4)(x+3) = 0$$

$$x-4=0 \quad x+3=0$$

$$x=4 \checkmark \quad x=-3 \times$$

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#10.



$$A = \frac{(B+b) \cdot h}{2}$$

$$24 = \frac{(8+x) \cdot x}{2}$$

$$48 = (8+x)x$$

$$48 = 8x + x^2$$

$$0 = x^2 + 8x - 48$$

$$0 = x^2 + 12x - 4x - 48$$

$$0 = x(x+12) - 4(x+12)$$

$$0 = (x+12)(x-4)$$

$$x+12=0 \quad x-4=0$$

$$x=-12 \quad x=4$$

$$\begin{array}{r} -48 \\ \hline 8-6 \\ 24-2 \\ 12-4 \end{array} \begin{array}{l} +8 \\ = 2x \\ = 22x \\ = 8 \checkmark \end{array}$$