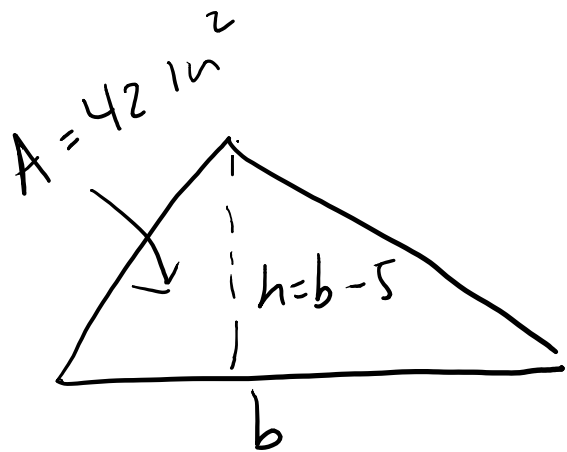


#11



$$b = 12$$

$$h = 7$$

$$\frac{1}{2}bh = A$$

$$\frac{1}{2}b(b-5) = 42$$

$$b(b-5) = 84$$

$$b^2 - 5b = 84$$

$$b^2 - 5b - 84 = 0$$

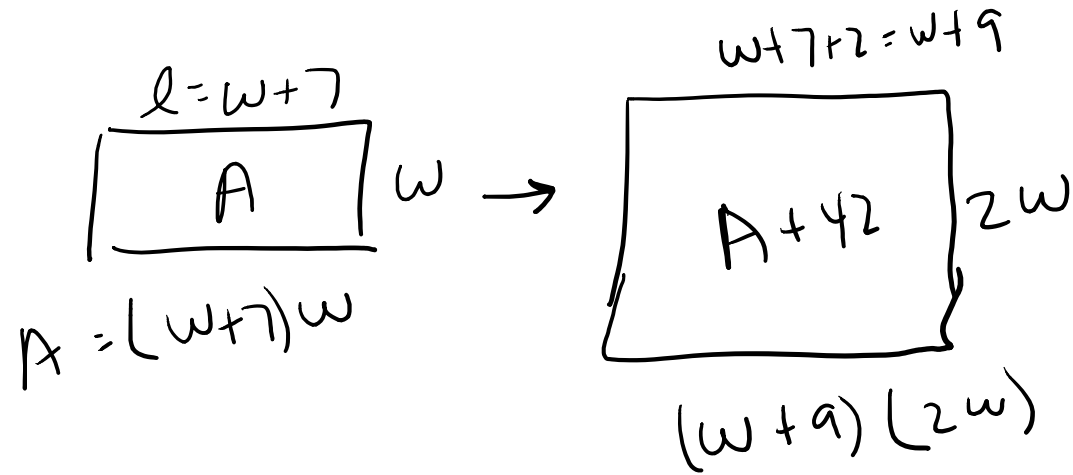
$$(b-12)(b+7) = 0$$

$$b-12=0$$

$$b+7=0$$

$$b = 12 \text{ or } -7$$

# 2



$$(w + 7)(w) + 42 = (w + 9)(2w)$$

10 units  $\times$  30 units

$$w^2 + 7w + 42 = 2w^2 + 18w$$
$$-w^2 - 7w - 42$$

$$0 = w^2 + 11w - 42$$

$$0 = (w + 14)(w - 3)$$

$$w + 14 = 0 \quad \text{or} \quad w - 3 = 0$$

$$w = \cancel{-14} \text{ or } 3$$

#3

$$\begin{array}{l} X \\ X + 1 \\ X + 2 \end{array}$$

10 years  
11 years  
12 years

$$X^2 = 8(x+2) + 4$$

$$X^2 = 8x + 16 + 4$$

$$X^2 = 8x + 20$$

$$X^2 - 8x - 20 = 0$$

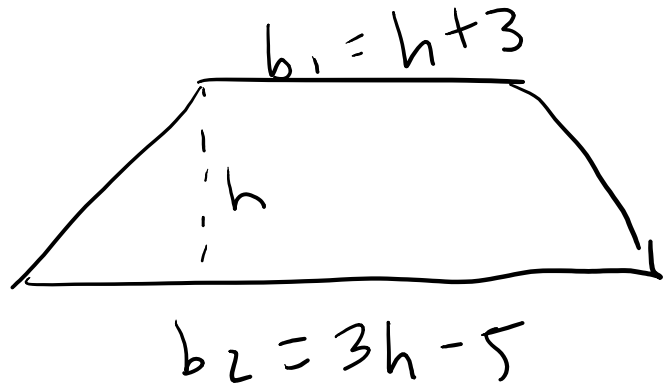
$$(x-10)(x+2) = 0$$

$$x-10=0 \quad \text{or} \quad x+2=0$$

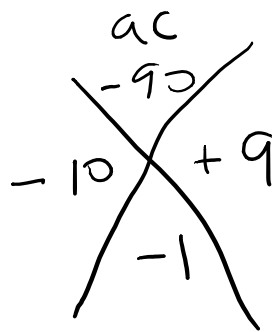
$$x=10$$

~~2~~

# 4



	$h$	$-5$
$2h$	$2h^2$	$-10h$
$9$	$9h$	$-45$



$$h - 5 = 0 \text{ or } 2h + 9 = 0$$

$$h = 5 \text{ cm, or } \frac{9}{2}$$

$$2h + 9 = 0$$

$$2h = -9$$

$$h = -\frac{9}{2}$$

$$\frac{b_1 + b_2}{2} h = A$$

$$\frac{1}{2} (b_1 + b_2) h = A$$

$$\frac{1}{2} (h + 3 + 3h - 5) h = 45$$

$$(4h - 2) h = 90$$

$$4h^2 - 2h = 90$$

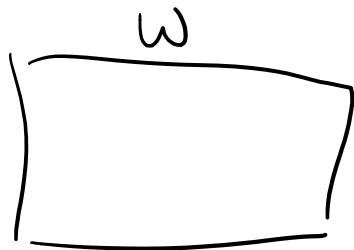
$$4h^2 - 2h - 90 = 0$$

$$2(2h^2 - h - 45) = 0$$

$$2(h - 5)(2h + 9) = 0$$

#5

$$70 - w = l$$



$$2(l + w) = 140$$

$$l + w = 70$$

$$l = 70 - w$$

~~70~~  
30m x 40m

$$w(70 - w) = 1200$$

$$70w - w^2 = 1200$$

$$0 = w^2 - 70w + 1200$$

$$(w - 30)(w - 40)$$

$$w = 30 = \textcircled{0} \quad \text{or} \quad w = 40 = 0$$

$$w = 30 \quad \text{or} \quad 40$$