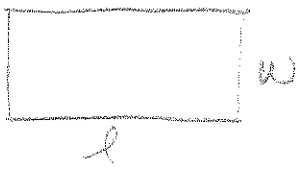
5/18/15 Area Problems

TEST WED.!

Ch 8 Part 2 Factoring & Solving Quadratics

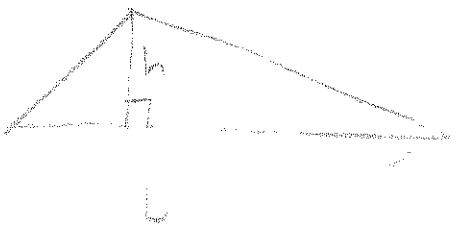
Area of Rectangle

$A = l \cdot w$



Area of Triangle

$A = \frac{1}{2} \cdot b \cdot h = \frac{bh}{2}$



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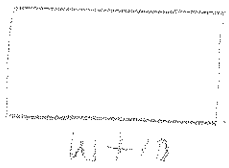
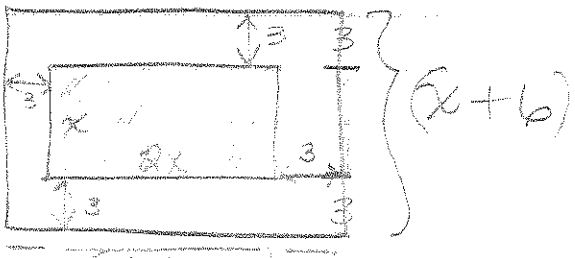
of a rectangle

The length is 10 more than the width. Draw & find the area in terms of the width for the rectangle.



$w(w+10)$

$w^2 + 10w$



Area Shaded $= 2x(x)$

$= 2x^2$

Area Whole thing $= (2x+6)(x+6)$

$= 2x^2 + 12x + 6x + 36$

$= 2x^2 + 18x + 36$

Write an expression for Area.

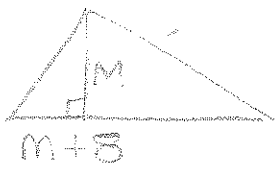
① 

$A = lw$

Factored $A = (x+7)(2x+5)$

So $A = 2x^2 + 19x + 35$

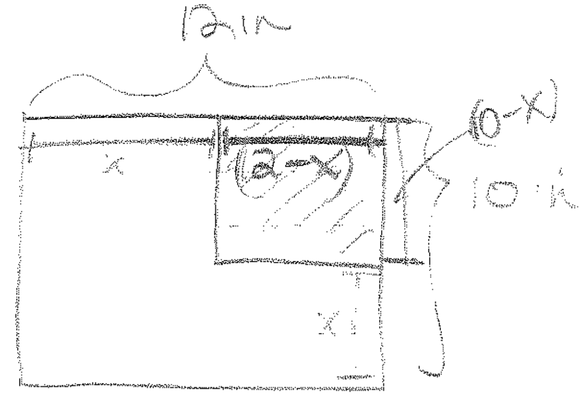
$A = \frac{bh}{2}$ ②

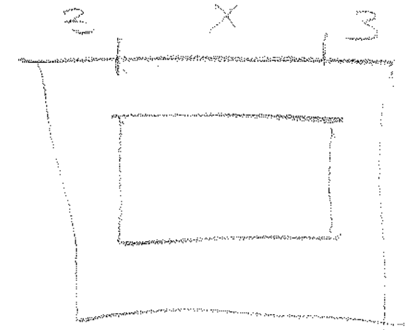


$\frac{m(m+8)}{2}$

$\frac{m^2+8m}{2}$

$\frac{m^2}{2} + \frac{8m}{2}$





Area of small = $(10-x)(12-x)$

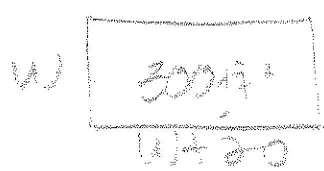
$120 - 10x - 12x + x^2$

$x^2 - 22x + 120$

Rectangular [illegible] length is 20 feet greater [illegible] width.

Write expression for [illegible] $A = w(w+20)$,

$A = w^2 - 20w$



The length [illegible] 30 and width [illegible].

The area of the [illegible] [illegible] 300 sq-feet.
Find [illegible] dimensions

$300 = w^2 + 20w$

$-300 \quad -300$ [illegible]

$0 = w^2 + 20w - 300$

$0 = (w-10)(w+30)$

$w - 10 = 0 \qquad w + 30 = 0$

$+10 \quad +10 \qquad w = -30$

$w = 10$