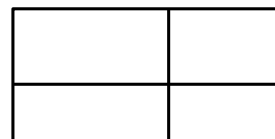
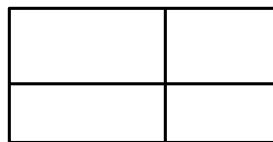
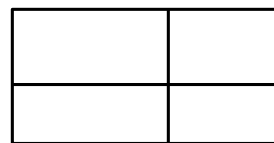


1. Remove parenthesis:

$$(x + 3)(x + 4) = \underline{\hspace{2cm}}$$

$$(2x + 3) \cdot (x + 1) = \underline{\hspace{2cm}}$$

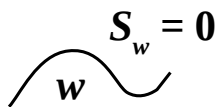
$$(3 - x)(4x - 2) = \underline{\hspace{2cm}}$$



Properties of Area:

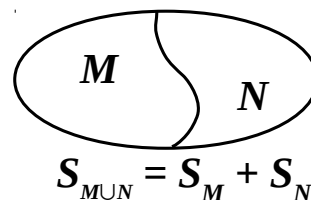
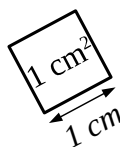
Area is a function defined for shapes

I. Congruent shapes have equal areas.

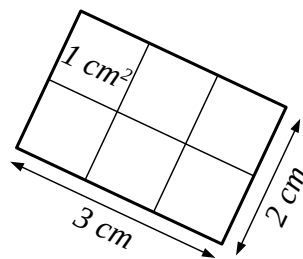


II. Any line has area zero.

III. The area of a union of two shapes whose intersection is a line equals the sum of the areas of these shapes.



IV. Area of a square with 1 cm sides is 1 cm².
(Any other unit may be used instead of cm)

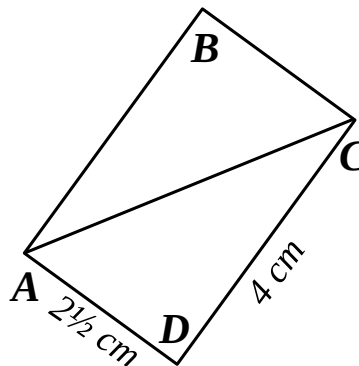


2. The rectangle **ABCD** on the drawing is split into two triangles:

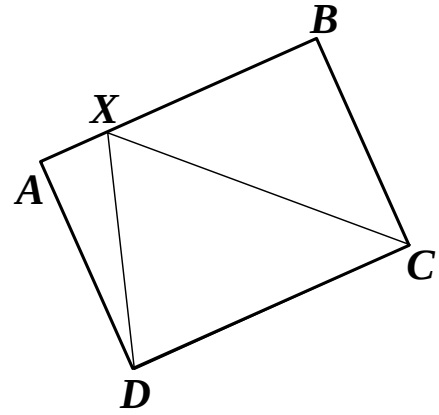
a). Find area of rectangle **ABCD**.

b). Compare areas of $\triangle ABC$ and $\triangle ACD$

c). Find area of $\triangle ABC$

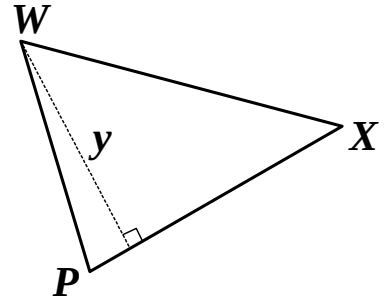


3. The area of the rectangle ABCD on the drawing is x . Show that the area of the $\triangle DXC$ is $\frac{1}{2}x$.



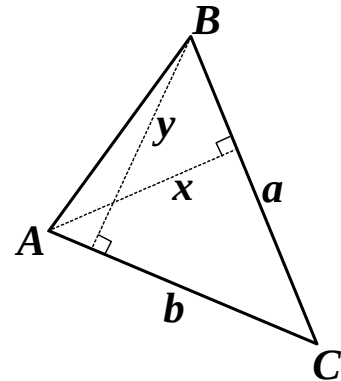
4. Show that the area of the $\triangle PWX$ on the drawing equals:

$$S = \frac{1}{2} y \cdot |PX|$$



5. The heights of a scalene $\triangle ABC$ on the drawing are x and y ; $|AC| = b$, $|BC| = a$.

Show that $ax = by$



6. Find the difference between the dark and light Grey areas

Hint: not sure what is the area of the overlap? Call it x .

