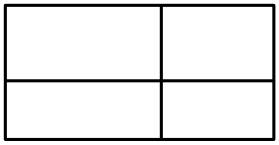
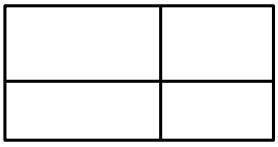
1. Remove parenthesis:

$(x + 3)\,(x + 4) =$ _____



$(2x + 3) \cdot (x + 1) =$ _____

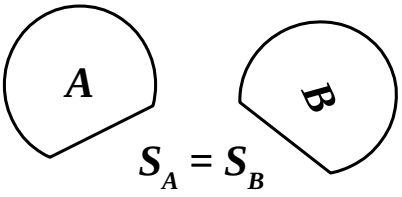


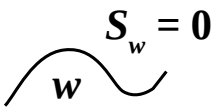
$(3 - x)\,(4x - 2) =$ _____

Properties of Area:

Area is a function defined for shapes

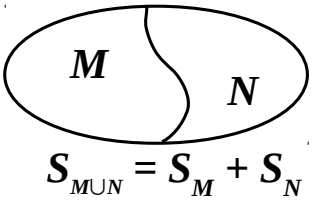
I. Congruent shapes have equal areas.

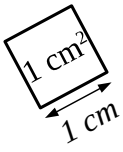




II. Any line has area zero.

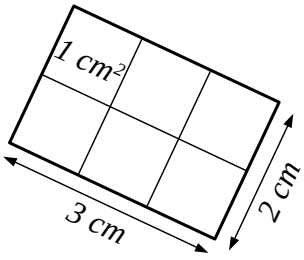
III. The area of a union of two shapes whose intersection is a line equals the sum of the areas of these shapes.





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

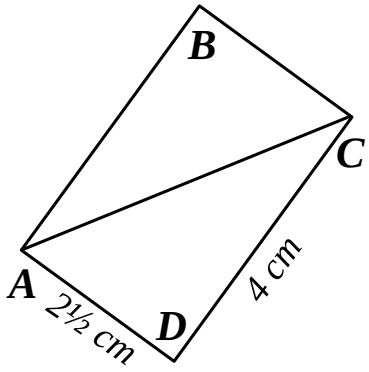
2. The rectangle ***ABCD*** on the drawing is split into two triangles:



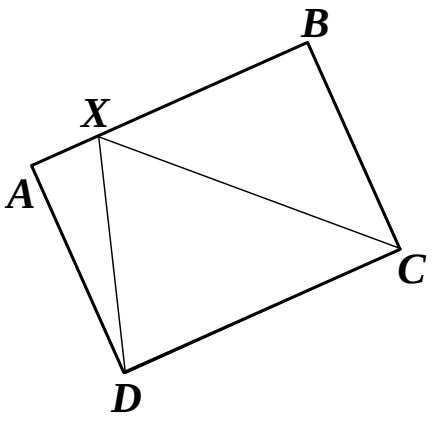
a). Find area of rectangle **ABCD**.

b). Compare areas of △***ABC*** and △***ACD***

c). Find area of △***ABC***

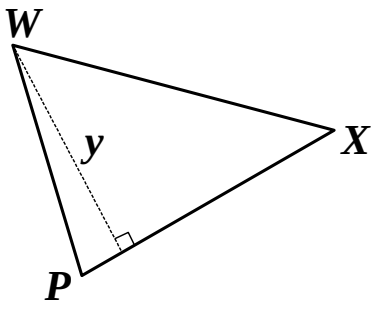


3. The area of the rectangle ABCD on the drawing is x. Show that the area of the $\triangle DXC$ is $\frac{1}{2}x$.



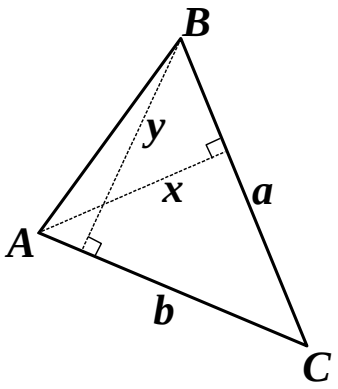
4. Show that the area of the $\triangle PWX$ on the drawing equals:

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



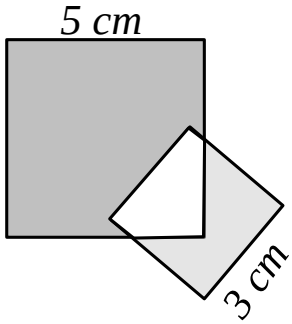
5. The heights of a scalene $\triangle ABC$ on the drawing are x and y; $|AC| = b$, $|BC| = a$.

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.



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