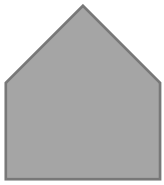
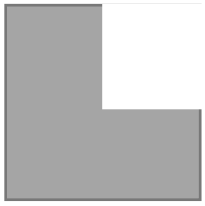
Session #3: 2D Composite Shapes

Today we will discover how easy it is to explore complex 2D shapes by breaking them down into shapes that we already know, like rectangles, trapezoids, squares, parallelograms!

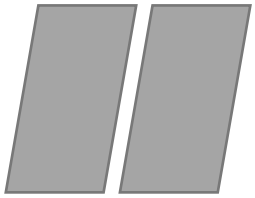
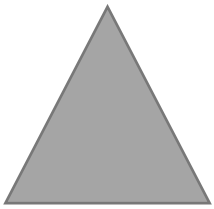
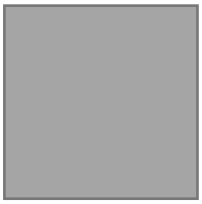
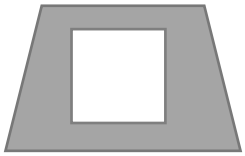
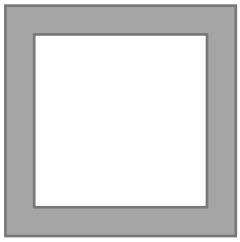
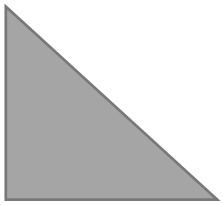
A **COMPOSITE SHAPE** is made from two or more geometric figures. These shapes can be added or subtracted together.



Find the area of this shape:



Math Scavenger Hunt!

 0.78	 20	 16
 21	 49	 9
 100	 75	 120

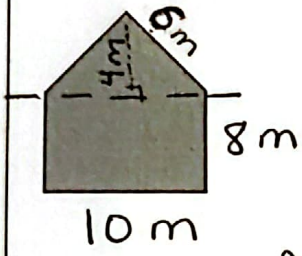
Session #3: 2D Composite Shapes

Today we will discover how easy it is to explore complex 2D shapes by breaking them down into shapes that we already know, like rectangles, trapezoids, squares, parallelograms!

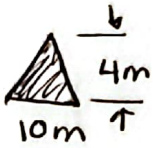
A **COMPOSITE SHAPE** is made from two or more geometric figures. These shapes can be added or subtracted together.

$\text{Area}_R = l \times w$

$\text{Area}_T = \frac{1}{2} b h$



+



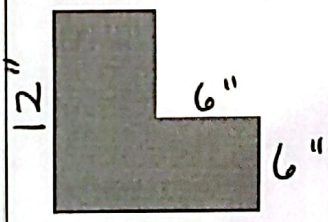
$A = l \times w + \frac{1}{2} b \times h$

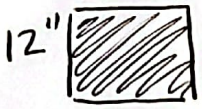
$A = (10m)(8m) + \frac{1}{2}(10m)(4m)$

$A = 80\,m^2 + 20\,m^2$

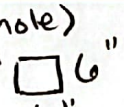
$\boxed{A = 100\,m^2}$

Find the area of this shape:





—



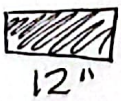
Rectangle:
$A = l \times w$

$A = (12")(12") - (6")(6")$

$A = 144\,in^2 - 36\,in^2$

$\boxed{A = 108\,in^2}$

OR:

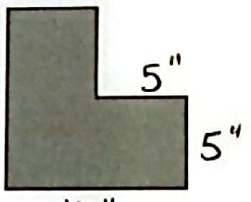


+

Area = $l \times w$

$A = (12")(6") + (6")(6") = 72 + 36\,in^2 = 108\,in^2$

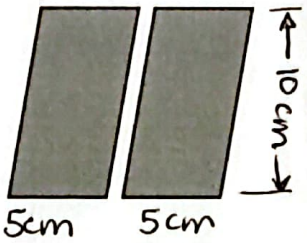
Math Scavenger Hunt!



$A = (10")(10") - (5")(5")$

$A = 75\ in^2$

0.78

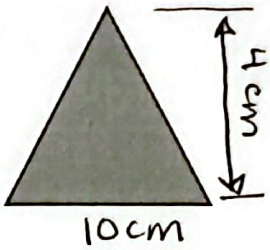


$A = b \cdot h = (5)(10)cm^2$

$A = 50cm^2$

$2A = 100cm^2$

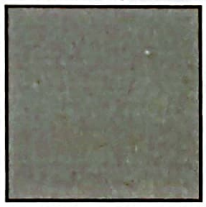
20



$A = \frac{1}{2} b \cdot h = \frac{1}{2}(10)(4)cm^2$

$A = 20cm^2$

16

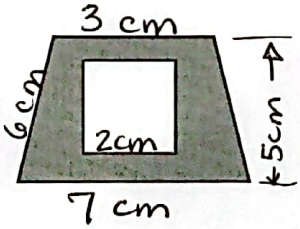


$A = L \cdot w$

$A = (4cm)(4cm)$

$A = 16\ cm^2$

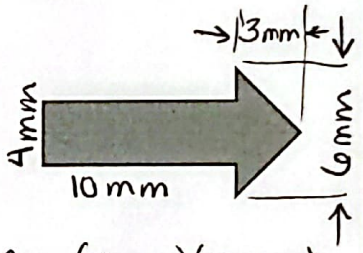
21



$A = \frac{1}{2}(3+7cm)(5cm) - (2cm)(2cm)$

$A = 21\ cm^2$

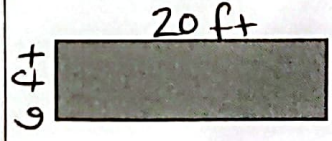
49



$A = (4mm)(10mm) + \frac{1}{2}(6mm)(3mm)$

$A = 49\ mm^2$

9

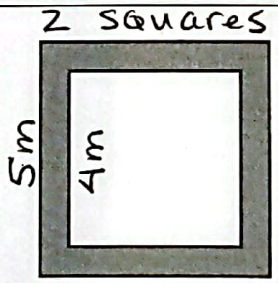


$A = L \times w$

$A = (20')(6')$

$A = 120\ ft^2$

100

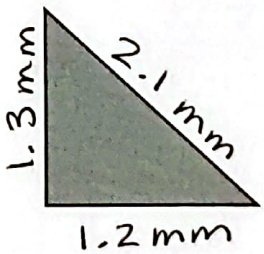


$A = (5m)(5m) - (4m)(4m)$

$A = 25m^2 - 16m^2$

$A = 9m^2$

75

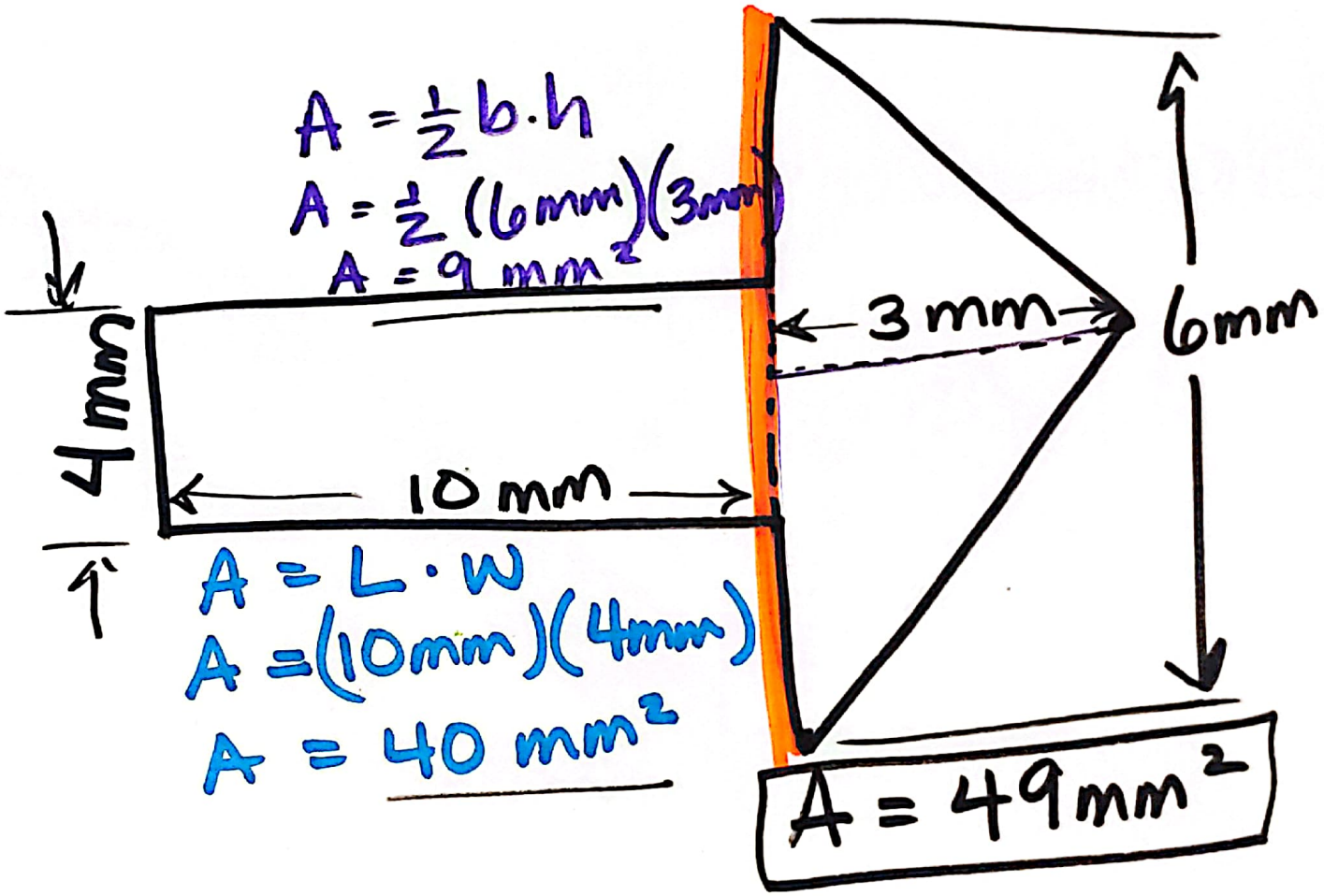


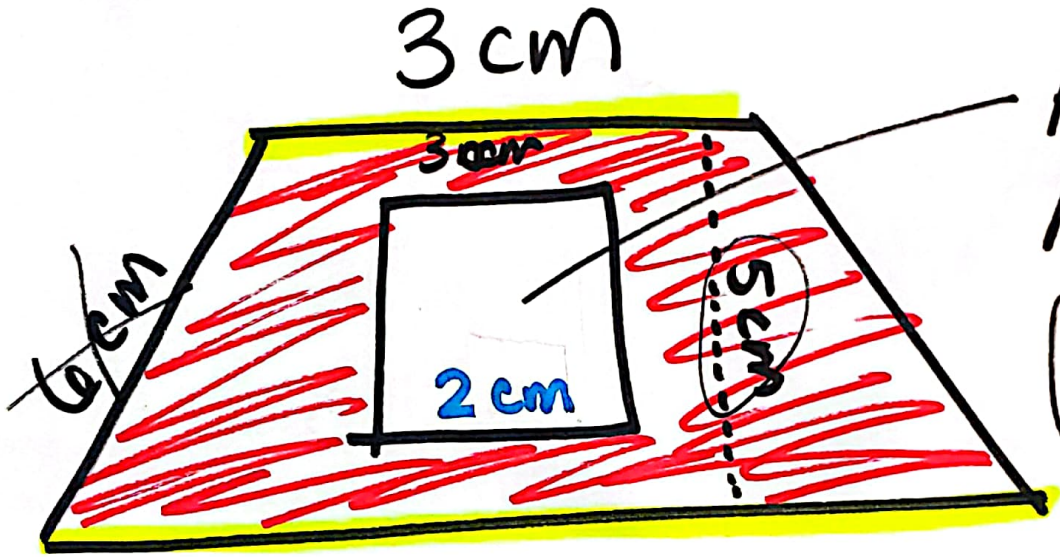
$A = \frac{1}{2} b \cdot h$

$A = \frac{1}{2}(1.2)(1.3)mm^2$

$A = 0.78\ mm^2$

120


A = ½ b·h
A = ½ (6mm)(3mm)
A = 9 mm²
3 mm
6mm
4mm
10 mm
A = L·W
A = (10mm)(4mm)
A = 40 mm²
A = 49mm²



$A = L \cdot W$

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

$A = 4\text{cm}^2$

square

25cm^2

-4cm^2

21cm^2

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

$A = \frac{1}{2}(3 + 7\text{ cm})(5\text{ cm})$

$A = \frac{1}{2}(10\text{ cm})5\text{cm} = 25\text{cm}^2$

trapezoid