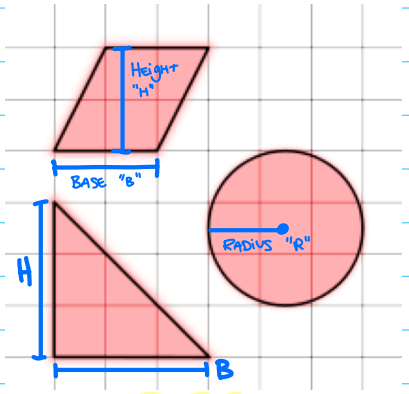
AREA INTRO & REVIEW

WHAT IS **AREA**? → LENGTH × WIDTH

→ AMOUNT OF SPACE COVERING A 2DIMENSIONAL SHAPE

↳ NOT DISTANCE



IMPORTANT: HEIGHT IS ALWAYS PERPENDICULAR TO THE BASE

AMOUNT OF PAINT TO COVER A SURFACE

OF SQ. UNITS CONTAINED WITHIN A 2D REGION

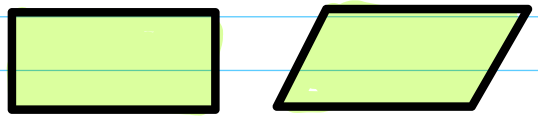
* WITH AREA... ALWAYS WRITTEN IN SQUARE UNITS EX: cm^2 *

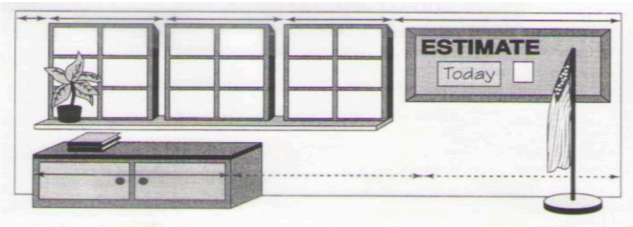
AREA FORMULAS

SHAPE	FORMULA	DIAGRAM
RECTANGLE	$A = LW$	L W
SQUARE	$A = L^2$	L
TRIANGLE	$A = \frac{1}{2}LW$ / $A = \frac{BH}{2}$	H L
CIRCLE	$A = \pi R^2$	R

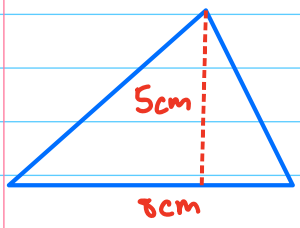
? DO TRIANGLES W/ THE SAME BASE & HEIGHT ALWAYS HAVE THE SAME AREA? ?

? THE FORMULA FOR FINDING THE AREA OF A RECTANGLE & PARALLELOGRAM ARE THE SAME. WHAT RELATIONSHIP DO THEY HAVE? WHY IS THE FORMULA THE SAME? ?



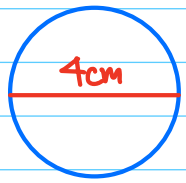


Estimate the LENGTH of this Room in terms of:
- Windows
- Plants
- Bulletin Board



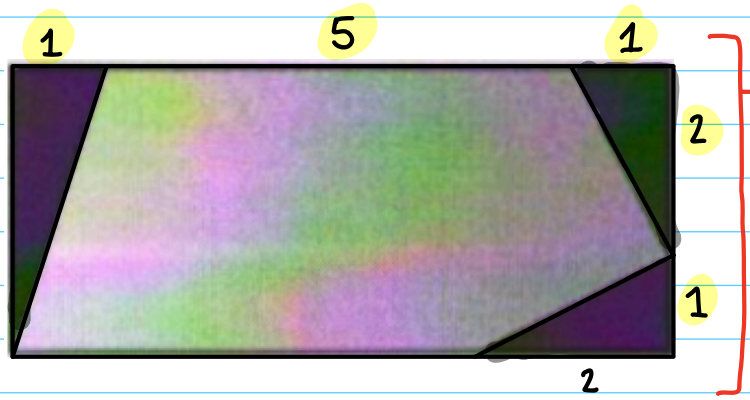
$\text{AREA} = \frac{LW}{2}$ OR $\frac{BH}{2}$

$= \frac{8 \times 5}{2} = \frac{40}{2} = \boxed{20\text{cm}^2}$

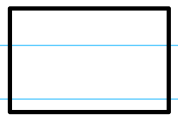


$\text{AREA} = \pi R^2$

$= \pi \times 2^2 = \pi \times 4 = 12.5663 = \boxed{12.6\text{ cm}^2}$

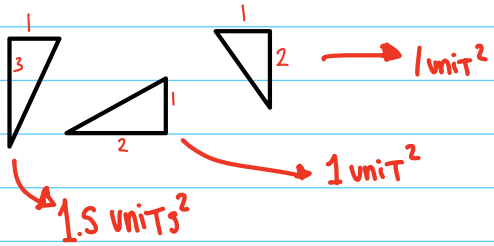


What is the AREA of the GREY POLYGON?

FULL  $= 7 \times 3 = 21\text{ units}^2$

TRIANGLES

$\frac{LW}{2}$



1 unit^2

1 unit^2

1.5 units^2

$= 21 - 1 - 1 - 1.5$

$= \boxed{17.5\text{ units}^2}$