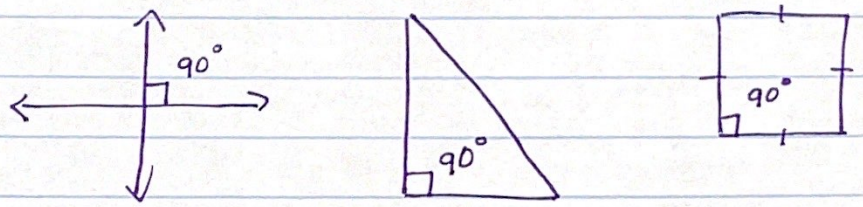
UNIT 5: GEOMETRY

DEF

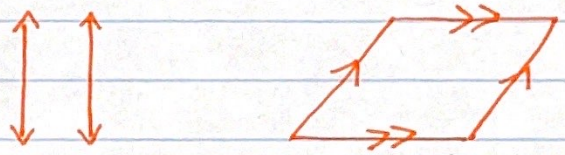
PERPENDICULAR: MEET AT A 90° (RIGHT) ANGLE



DEF

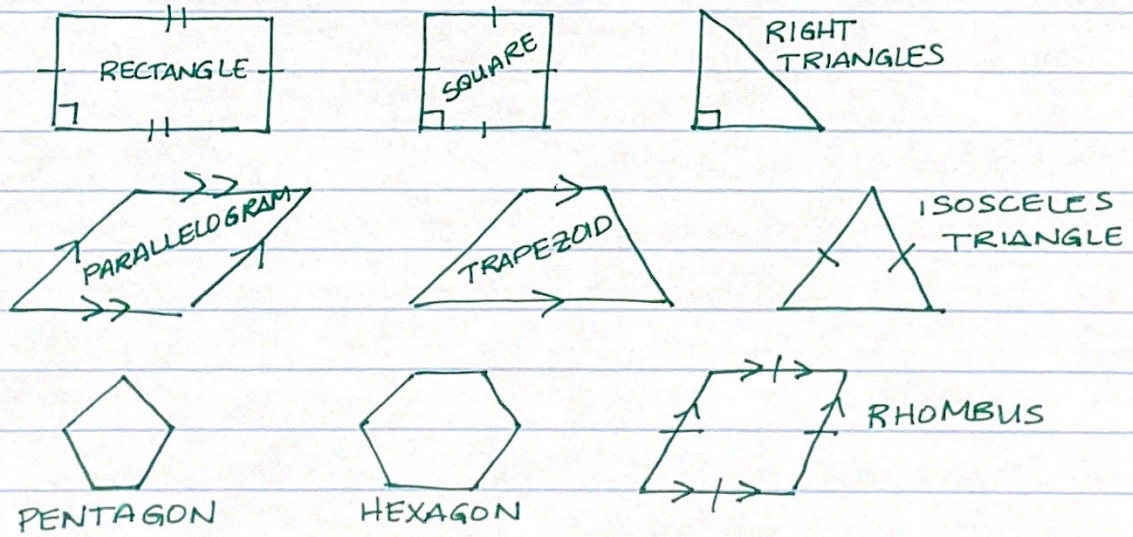
PARALLEL: LINES THAT NEVER TOUCH.

PARALLEL



DEF

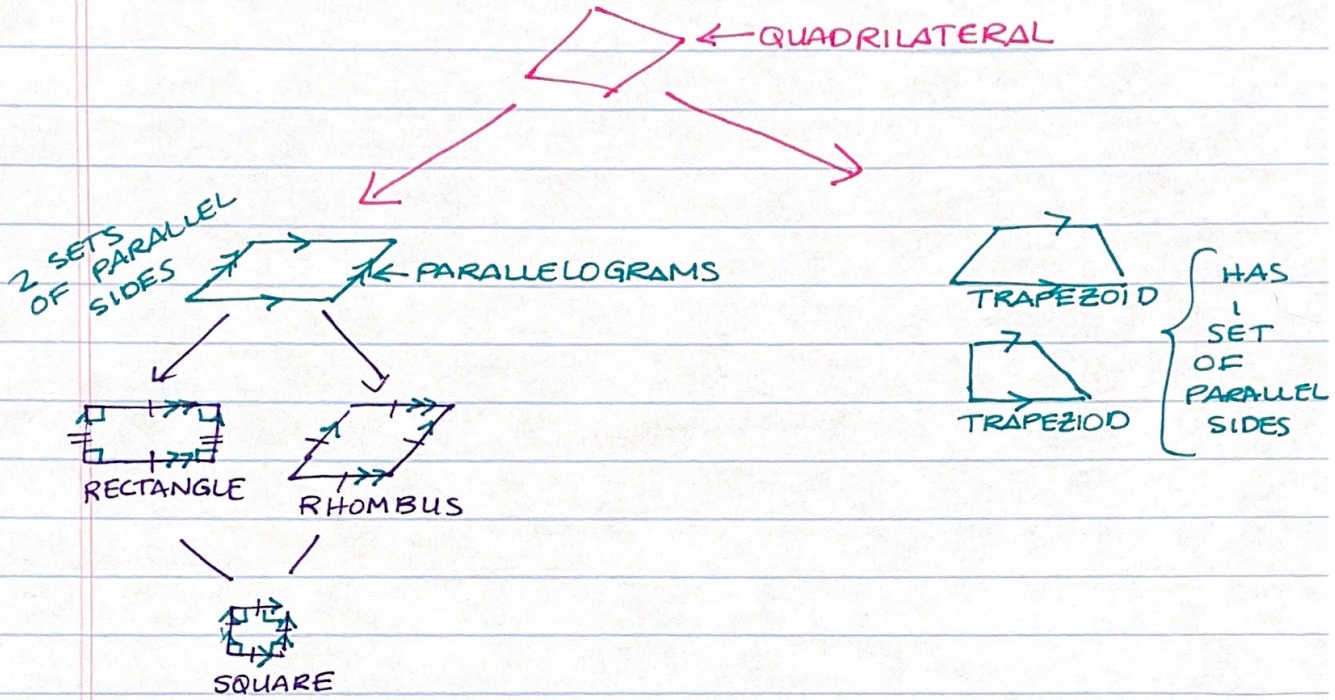
POLYGON: A CLOSED FIGURE FORMED BY 3 OR MORE LINE SEGMENTS



CLASSIFYING QUADRILATERALS

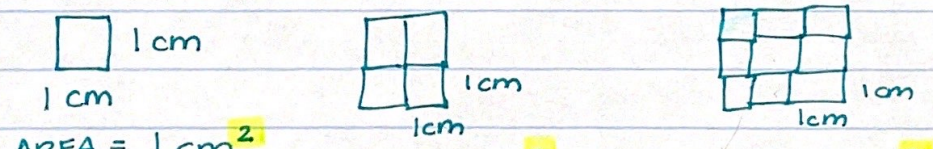
DEF

QUADRILATERAL: 4 SIDED POLYGON



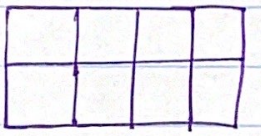
DEF

AREA: THE NUMBER OF SQUARE UNITS IT TAKES TO COVER A SURFACE



AREA = $1\ cm^2$ AREA = $1\ cm^2$ AREA = $9\ cm^2$

AREA OF A RECTANGLE: $A = bh$



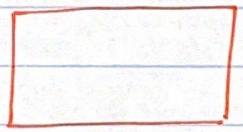
- A = AREA
- b = BASE
- h = Height

FORMULA ① $A = bh$

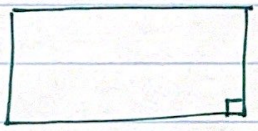
SUBSTITUTE ② $A = 4 \cdot 2$

SOLVE ③ $A = 8\ in^2$ DON'T FORGET THE UNITS

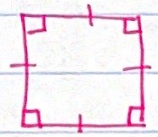
EXAMPLES:

1) 

$A = bh$
$A = 14 \cdot 7$
$A = 98\ in^2$

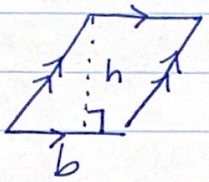
2) 

$A = bh$
$A = 15 \cdot 10$
$A = 150\ in^2$

3) 

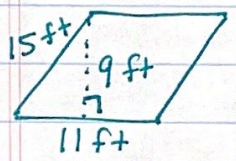
$A = bh$
$A = 22 \cdot 22$
$A = 484\ cm^2$

AREA OF A PARALLELOGRAM $A = bh$

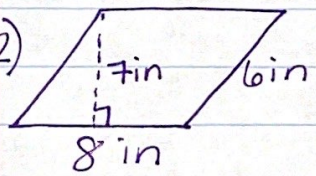


HEIGHT IS ALWAYS PERPENDICULAR TO THE BASE

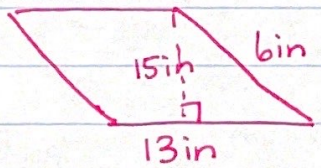
EXAMPLES:

1) 

$A = bh$
$A = 11 \cdot 9$
$\boxed{A = 99 \text{ ft}^2}$

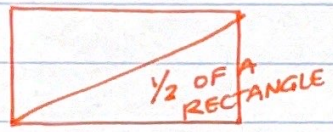
2) 

$A = bh$
$A = 8 \cdot 7$
$\boxed{A = 56 \text{ in}^2}$

3) 

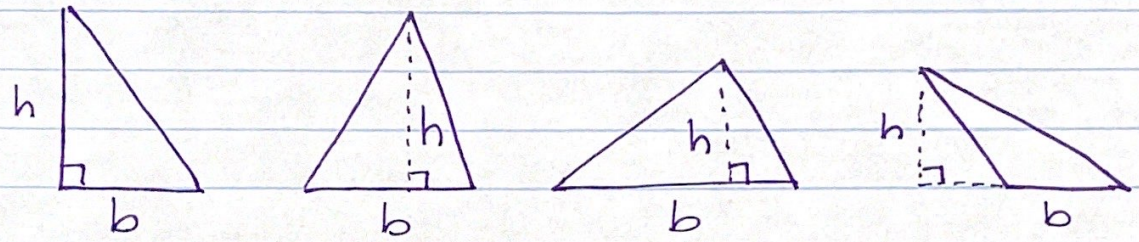
$A = bh$
$A = 13 \cdot 15$
$\boxed{A = 195 \text{ in}^2}$

AREA OF TRIANGLES



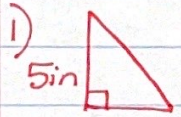
$A = \frac{1}{2}bh$ OR $A = \frac{bh}{2}$

HEIGHTS OF TRIANGLES



EXAMPLES:

1)



$A = \frac{bh}{2}$

$A = \frac{6 \cdot 5}{2}$

$A = \frac{30}{2} = 15in^2$

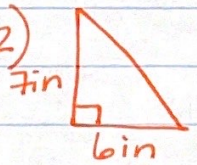
OR

$A = \frac{1}{2}bh$

$A = \frac{1}{2}(6)(5)$

$A = 15in^2$

2)



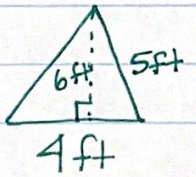
$A = \frac{bh}{2}$

$A = \frac{7 \cdot 6}{2}$

$A = \frac{42}{2}$

$\boxed{A = 21in^2}$

3)



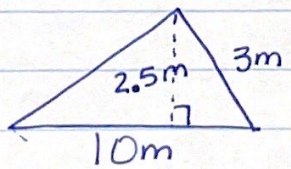
$A = \frac{bh}{2}$

$A = \frac{4 \cdot 6}{2}$

$A = \frac{24}{2}$

$\boxed{A = 12ft^2}$

4)



$A = \frac{bh}{2}$

$A = \frac{10 \cdot 2.5}{2}$

$A = \frac{25}{2}$

$\boxed{A = 12.5m^2}$

RECTANGLE

AREA = 20 in^2

b = 5

h = ?

$A = bh$

$\frac{20}{5} = \frac{5h}{5}$ ← EQUATION

$4 = h$