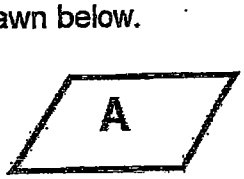
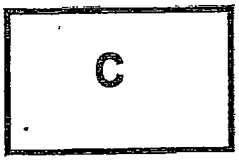
0.2

Name _____ Date _____ Block ____ Log # ____

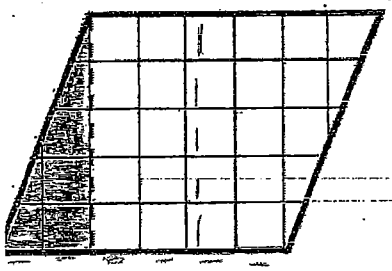
Area of Parallelograms

A **parallelogram** is a quadrilateral with two sets of parallel sides. Several parallelograms are drawn below.





It would be simple to find the area of parallelograms C and D, simply by counting the number of square units. However, it might be more difficult for parallelograms A and B, since they are not made up of complete square units.



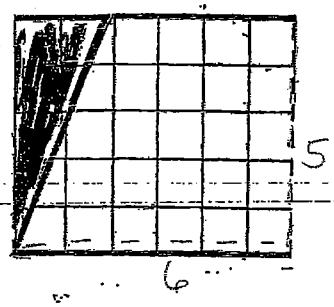
Base: 6

Height: 5

Area: $A = b \cdot h$

$A = 6 \cdot 5$

$A = 30u^2$



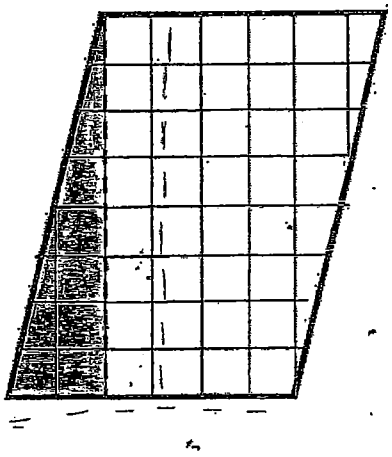
Length: 6

Width: 5

Area: $b \cdot h$

$6 \cdot 5$

$30u^2$



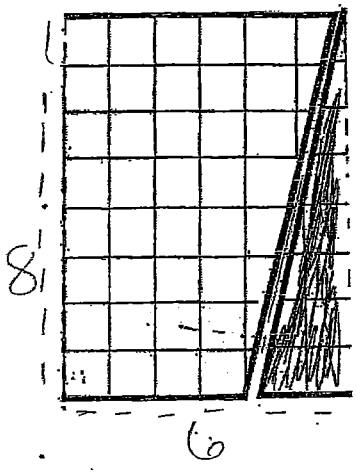
Base: 6

Height: 8

Area: $A = b \cdot h$

$A = 6 \cdot 8$

$A = 48u^2$



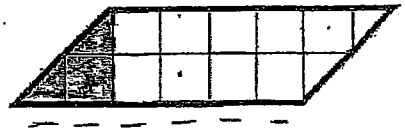
Length: 6

Width: 8

Area: $A = b \cdot h$

$A = 6 \cdot 8$

$48u^2$



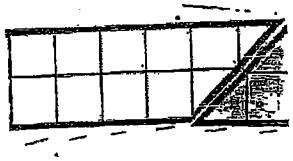
Base: 6

Height: 2

Area: $A = b \cdot h$

$A = 6 \cdot 2$

$A = 12u^2$



Length: 6

width: 2

Area: $A = b \cdot h$

$A = 6 \cdot 2$

$A = 12u^2$

The **base** of a parallelogram can be any side.

The **height** of a parallelogram must be perpendicular to the base. Form 90° angles

Find the base and the height of each of the following parallelograms.

Area of Parallelograms

When we decomposed the parallelogram, we recomposed them into rectanale.

Why would rearranging a shape make it easier for finding the area of an unusual shape?

- It easier to count squares for area
- easier to find height
- We know in order to find area of rectangle, it is lengths x width
  base x height

When rearranging the parallelogram, I noticed...

The <u>base of the parallelogram</u> was the [ ] **as the** length **<u>of the rectangle</u>.**

AND

The <u>height of the parallelogram</u> was the [ ] **as the** width **<u>of the rectangle</u>.**

Therefore, you could find the area of any parallelogram simply by base x height**. In a parallelogram, the length and width have special names. Instead of length and width, they are called** base **and** height**.**