"What makes a parallelogram special" activity:

Copy the following in your notes and fill in your answers there.

1.) Conclusion about opposite sides of a parallelogram:

Opposites have ≅ slopes which means they are parallel.

2.) Conclusion about relationship between side lengths:

Opposite sides are ≅ in length.

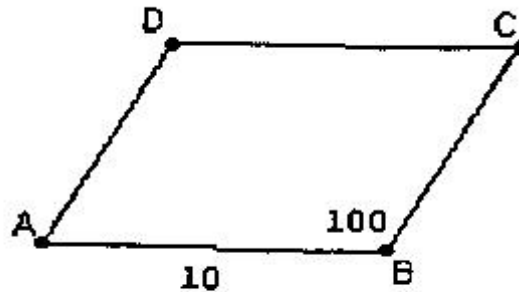3.) Conclusion about relationships between angles of a parallelogram:

Opposite ∠'s are ≅

4.) Conclusion about the measures of the diagonals of a parallelogram:
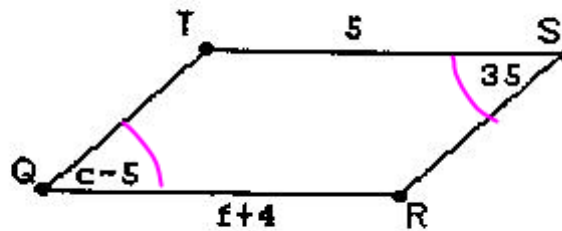
* Diagonals bisect each other

* Their intersection is the midpoint of both

1. Find CD and m<D.

D _____ C

A / 100 /

10   B

CD = ___10___   m<D = ___100___

2. Find the values of c and f.

T ___5___ S

35

Q /c-5

f+4   R

$5 = f + 4$

$35 = c - 5$
$+5 \qquad +5$
$\overline{40} =$

c = ___40___   f = ___1___

3. Find the values of a and b.

Z · Y

3b

33

V

a-3

21

W

X

a = __36__ b = __7__

$WY = 66$

$ZX = 42$

$a - 3 = 33$

$+3 \quad +3$

$a = 36$
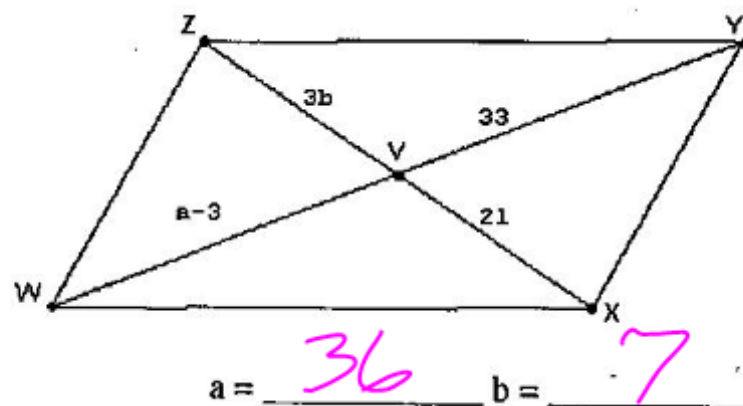
$\dfrac{3b}{3} = \dfrac{21}{3}$

$b = 7$

4. Find the perimeter of the parallelogram by first solving for n.

12

n-5

19

n+2 19

12

Perimeter = __62__

38
24
62

$12 = n - 5$

$n = 17$
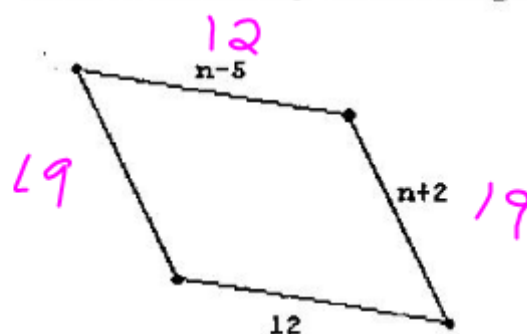
Parallelogram Properties notes (continued):

Vocabulary:

1.) Parallelogram - a polygon with opposite sides that are parallel

2.) Diagonal - a segment that connects nonconsecutive vertices of a polygon