Created by Mr. Lischwe

Warmup 3/ (Distance between (10, 12) and (10, 20)

1. A student claims there is an SSSS congruence criterion for parallelograms. That is, if all four sides of one parallelogram are congruent to the four sides of another parallelogram, then the parallelograms are congruent. Do you agree? If so, explain why. If not, give a counterexample. Hint: Draw a picture!

Check Homework

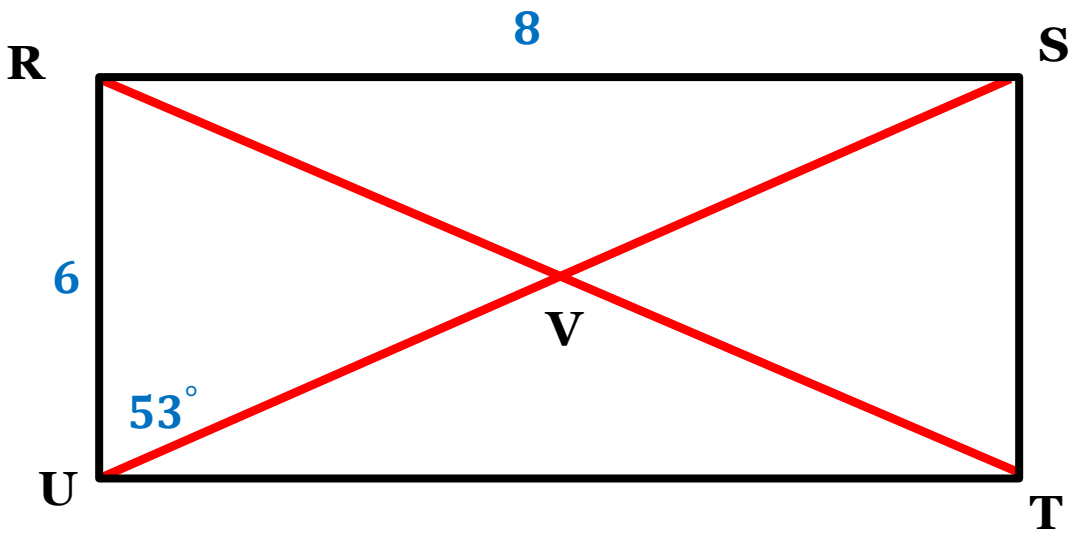
RSTU is a rectangle. Find each value.

1) TU 8

2) SV 5

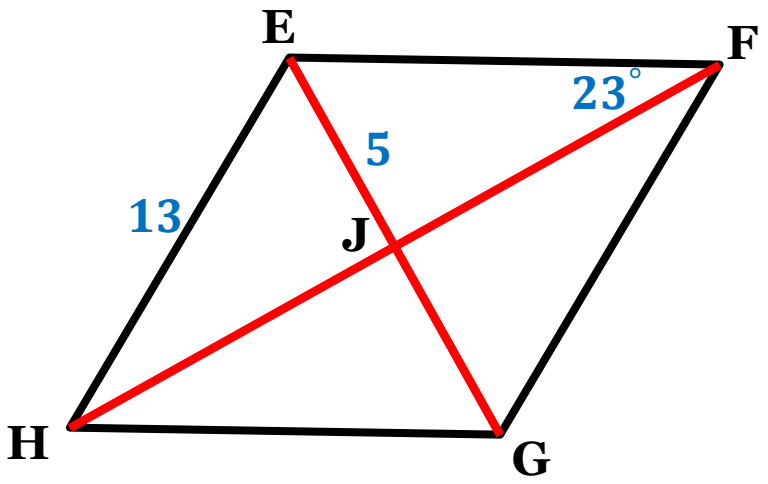
3) $m\angle RVU$ 74°

4) $m\angle RSU$ 37°

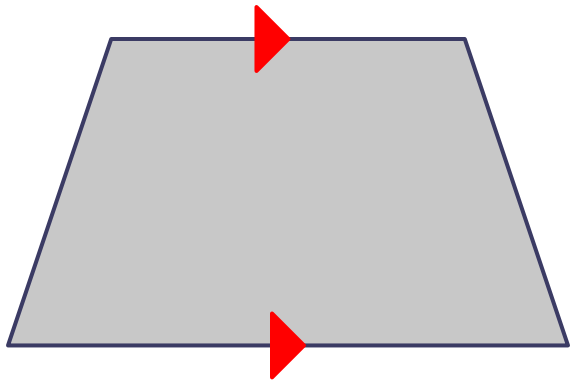


EFGH is a rhombus. Find each value.

1) $m\angle FHG$ 23°
2) $m\angle EGH$ 67°
3) $m\angle HEF$ 134°
4) $perimeter$ 52
5) JF 12

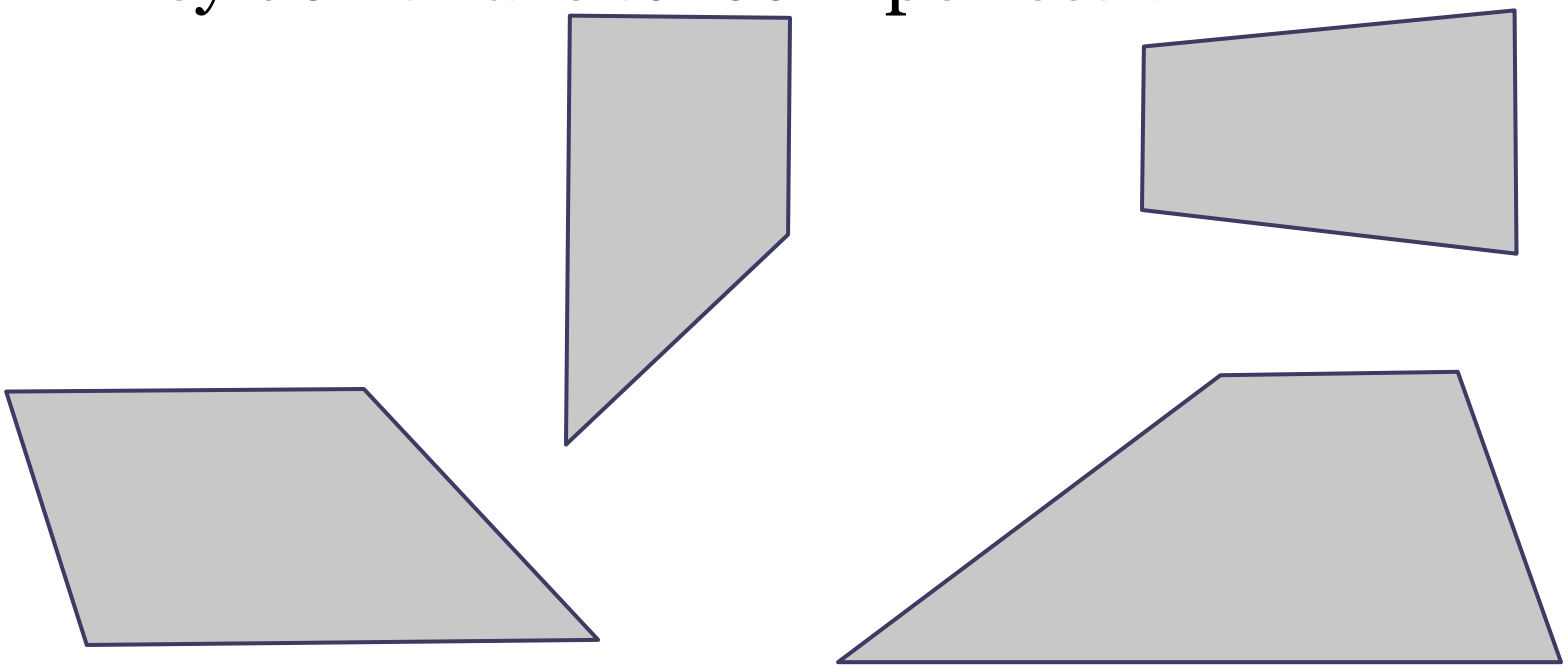


- **Trapezoid**
  - Only 1 pair of parallel sides

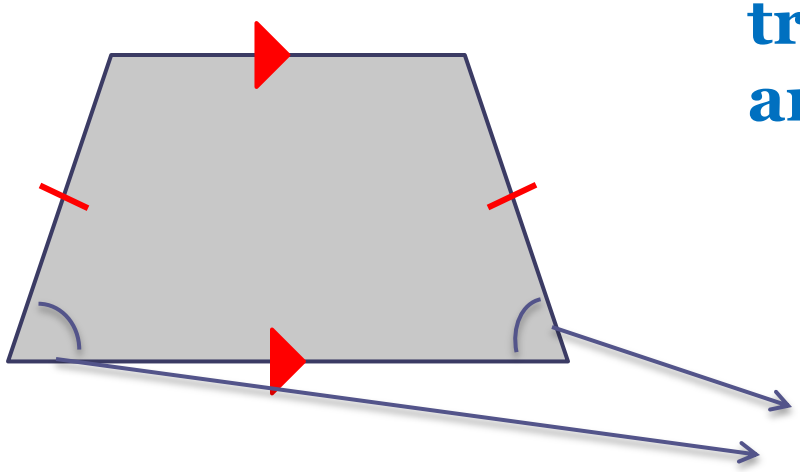


Examples of trapezoids…

- They don’t have to look “perfect”!



- **Isosceles Trapezoid**
  - A trapezoid with congruent legs

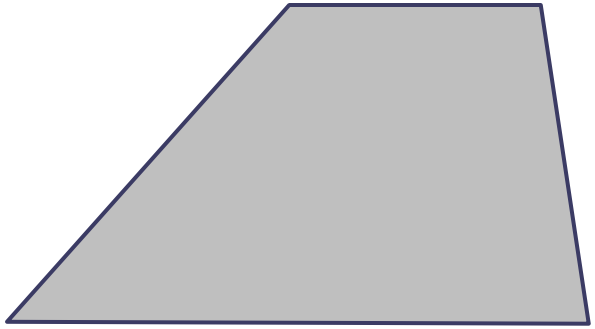


What could be true about the angles???

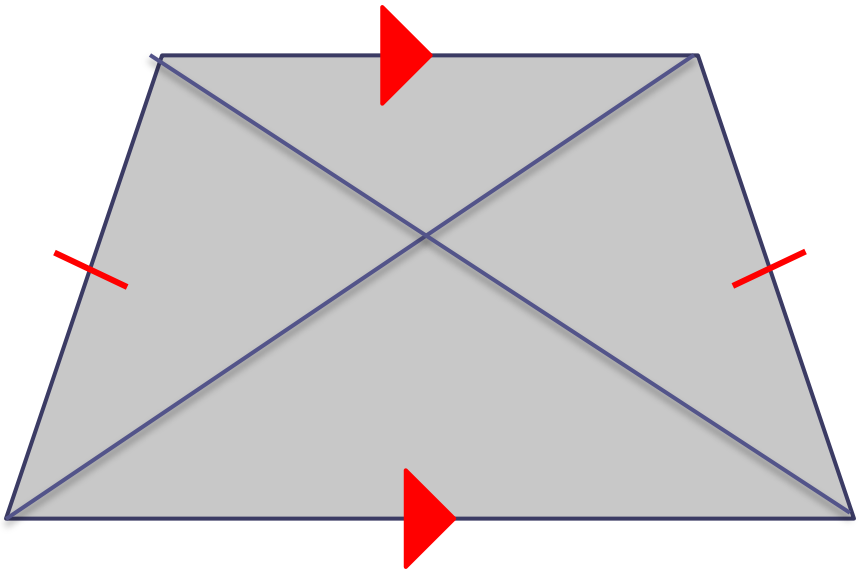
base angles are equal in measure!

Diagonals of a Trapezoid?

- Any special properties?

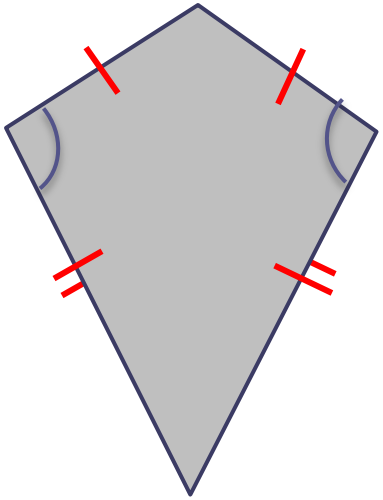


- **FACT: The diagonals of an isosceles trapezoid are congruent.**



How could we prove this???

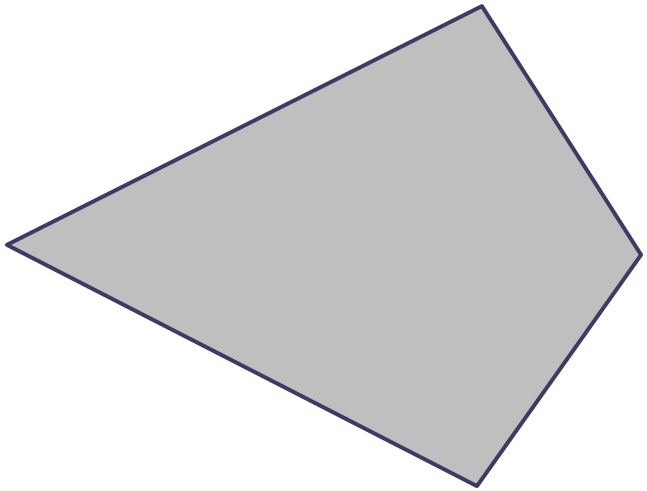
- **Kite**
  - 2 sets of consecutive sides that are congruent



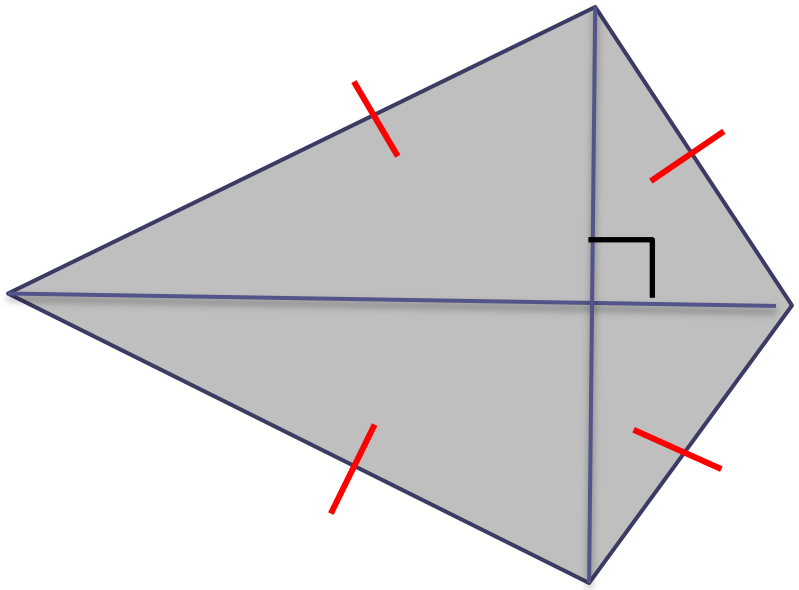
What could be true about the angles???

Diagonals of a Kite?

- Any special properties?



- **FACT: The diagonals of a kite are perpendicular.**



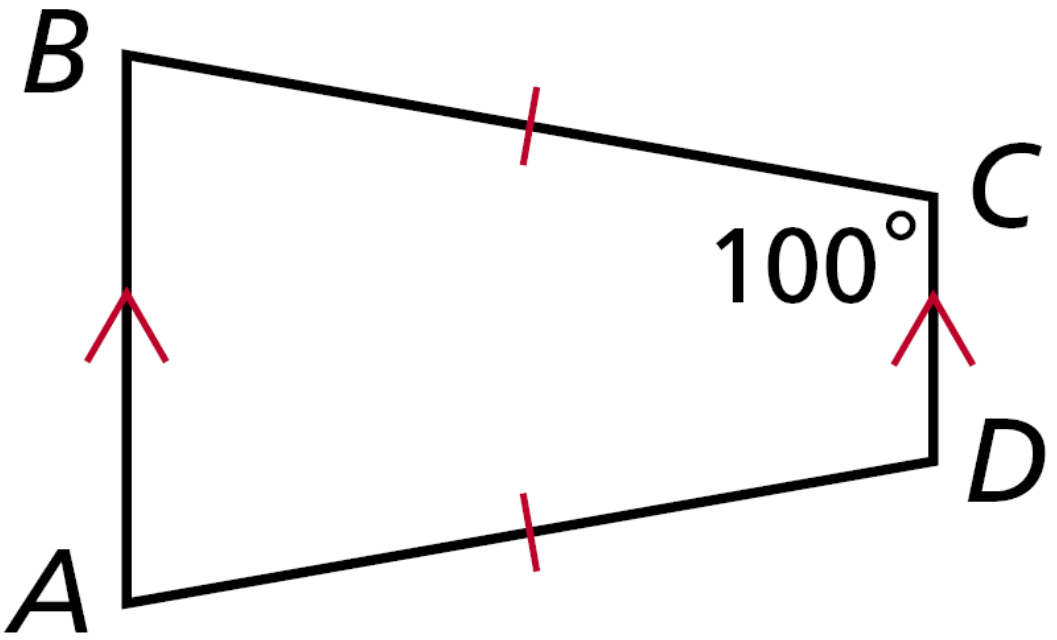
How could we prove this???

Can you…

- Draw a quadrilateral that isn't **ANY** of these shapes???

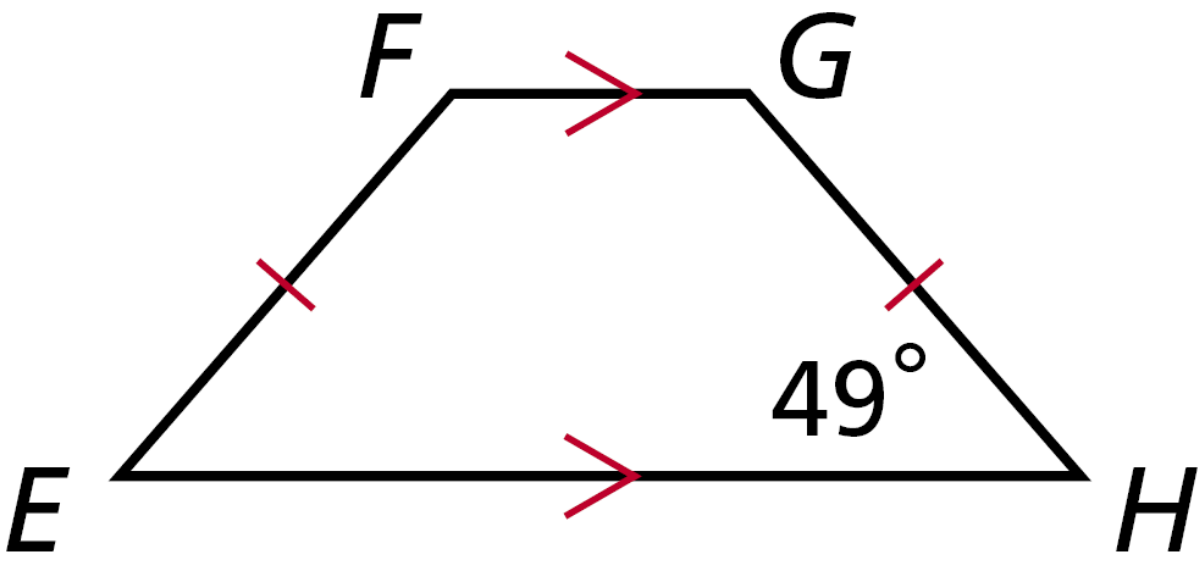
Find m∠*A*.

m∠*A* = 80°



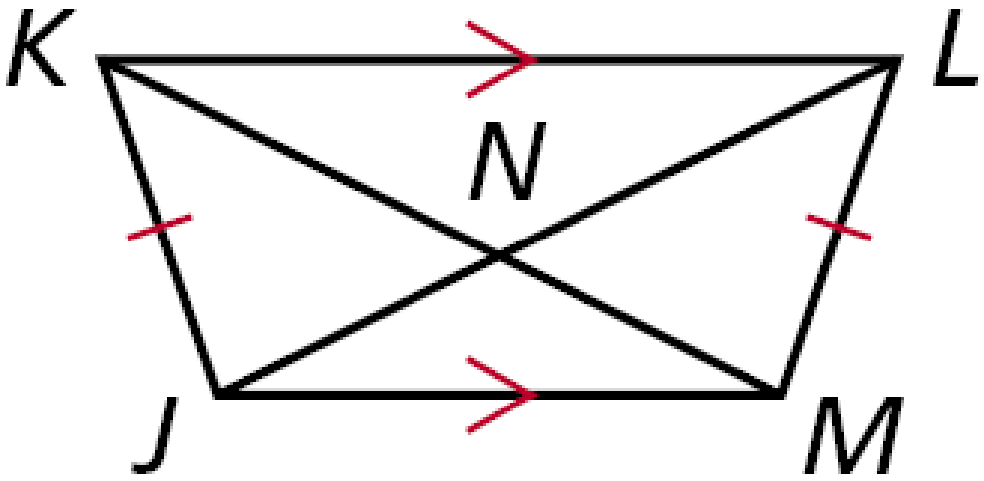
Find m∠*F*.

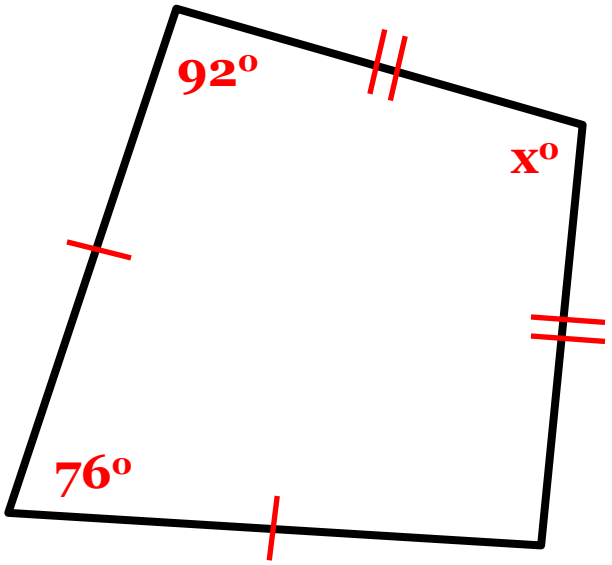
m∠*F* = 131°



$JN = 10.6$, and $NL = 14.8$. Find KM.

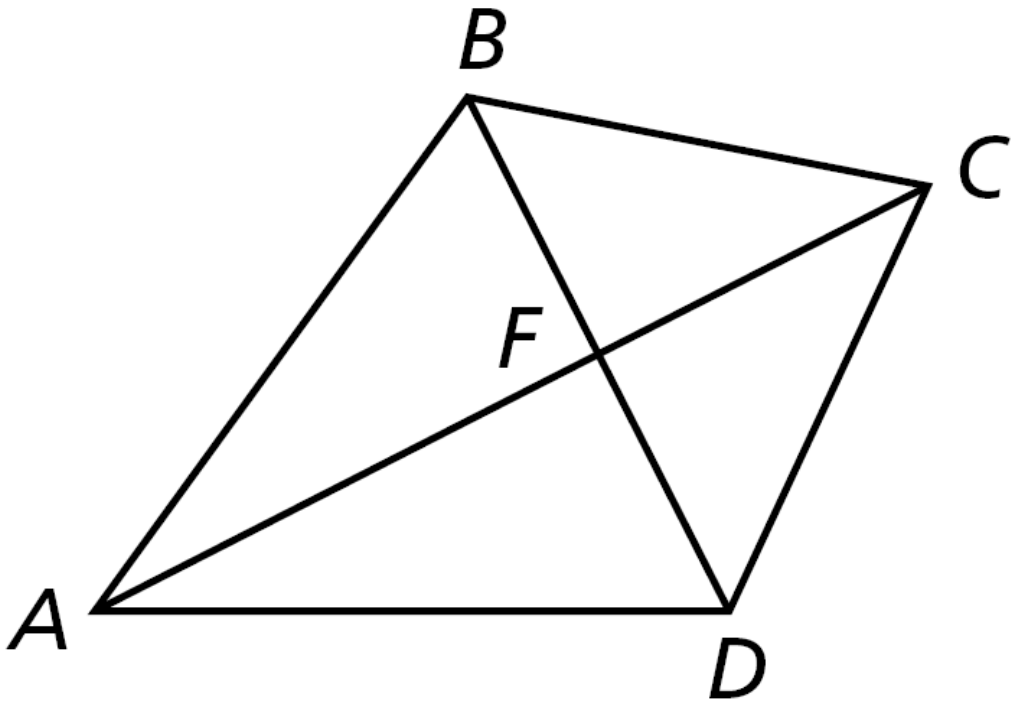
$KM = 10.6 + 14.8 = 25.4$




92°
x°
76°

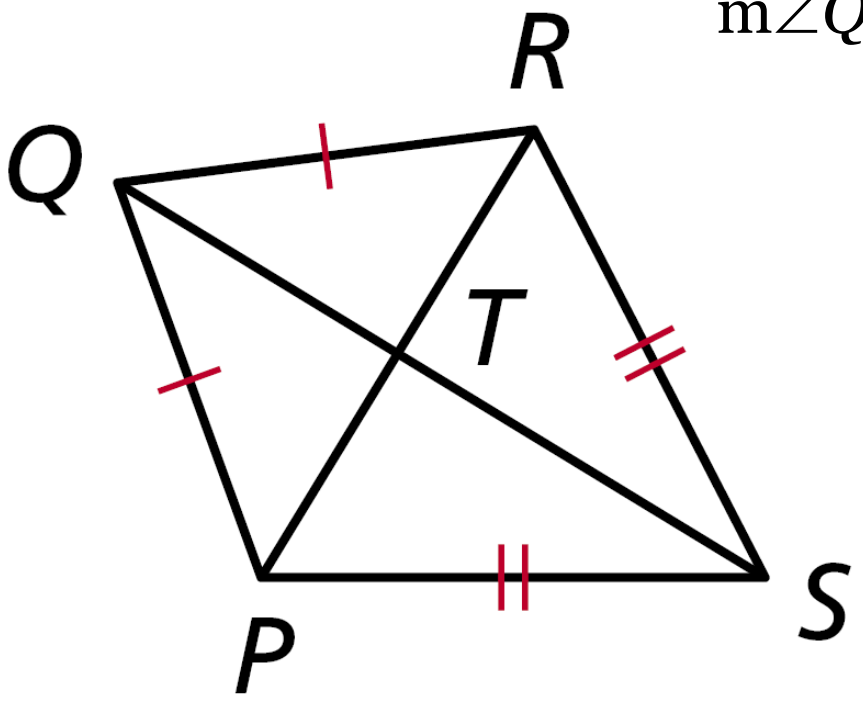
In kite *ABCD*,
m∠*CDF* = 52°. Find m∠*FCD*.

$m\angle FCD = 38°$



In kite *PQRS*, m∠*PQR* = 78°, and m∠*TRS* = 59°. Find m∠*QPS*.

m∠*QPS* = 110°



Cool Down

- Fill in the diagram

Homework

- pg. 1249 (1-4, 7-10, 15, 17)