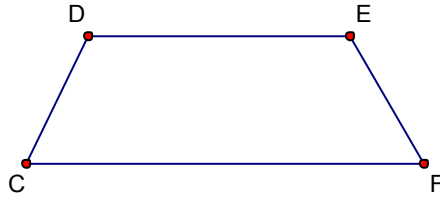


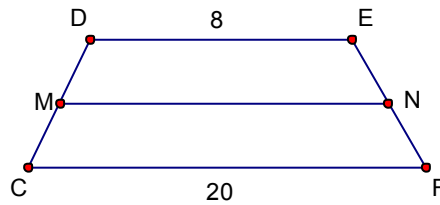
# Kites and Trapezoids

Name \_\_\_\_\_

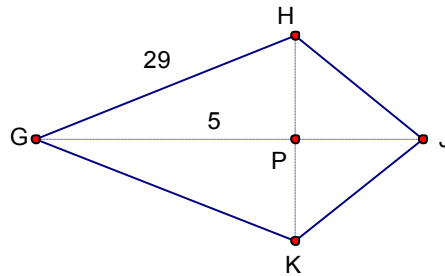
- 1)  $CDEF$  is an isosceles trapezoid with  $CD = 10$  and  $m\angle E = 95^\circ$ ,  
Find  $FE$ ,  $m\angle C$ ,  $m\angle D$ , and  $m\angle F$ .



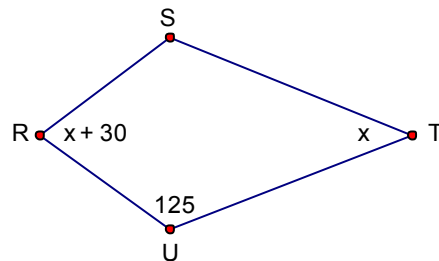
- 2) Use the midsegment theorem for trapezoids to determine the length of  $MN$ .



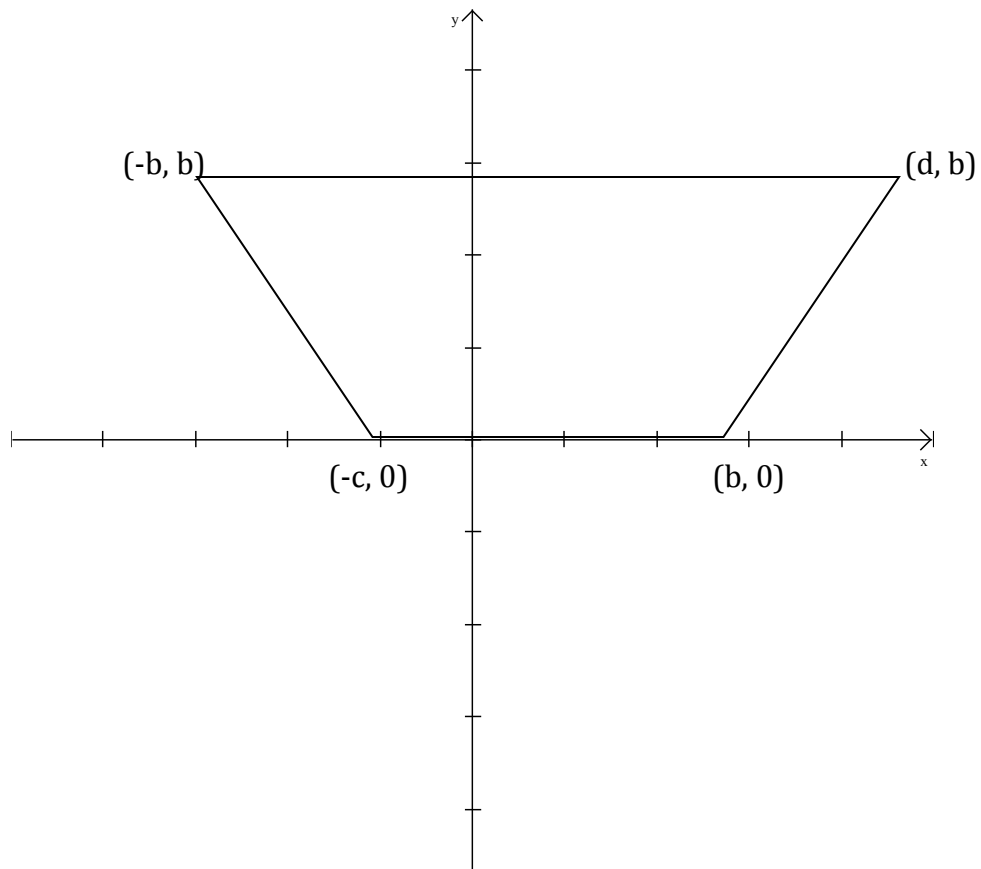
- 3)  $GHJK$  is a kite. Find  $HP$ . (use the Pythagorean theorem)



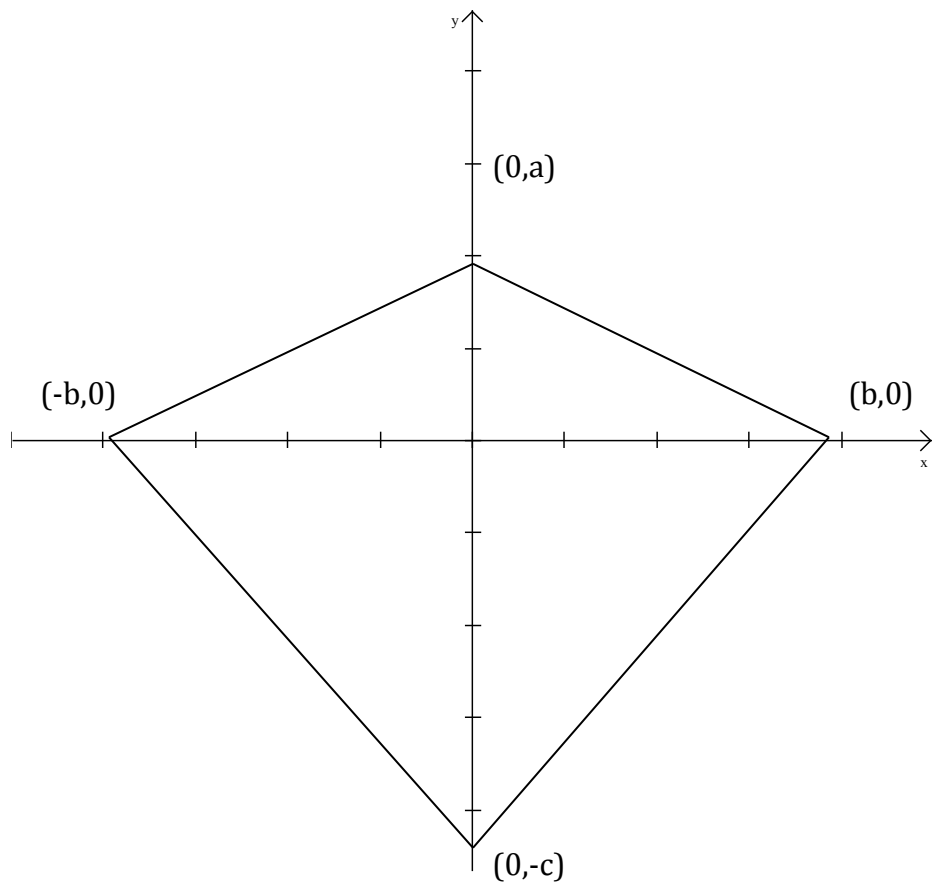
- 4)  $RSTU$  is a kite. Find  $m\angle R$ ,  $m\angle S$ , and  $m\angle T$ .



5) Prove that the quadrilateral below is a **trapezoid**.



6) Use a coordinate proof to prove the quadrilateral below is a kite. (Hint: What is the definition of a kite?)



7)

Property	Parallelogram	Rectangle	Rhombus	Square	Kite	Trapezoid
Both pairs of opp. Sides are $\parallel$ .						
Exactly 1 pair of opp. Sides are $\parallel$ .						
Diagonals are $\perp$ .						
Diagonals are $\cong$ .						
Diagonals bisect each other.						
Both pairs of opp. Sides are $\cong$ .						
Exactly 1 pair of opp. Sides are $\cong$ .						
All sides are $\cong$ .						
Both pair of opp. $\angle$ 's are $\cong$ .						
Exactly 1 pair of opp. $\angle$ 's are $\cong$ .						
All $\angle$ 's are $\cong$ .						