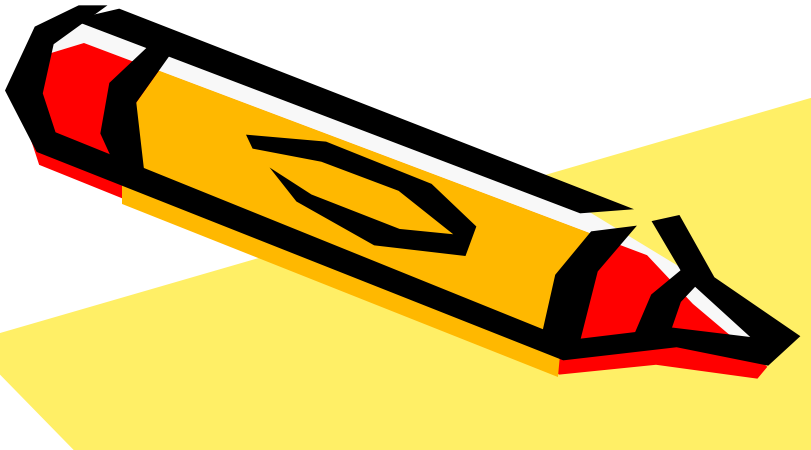
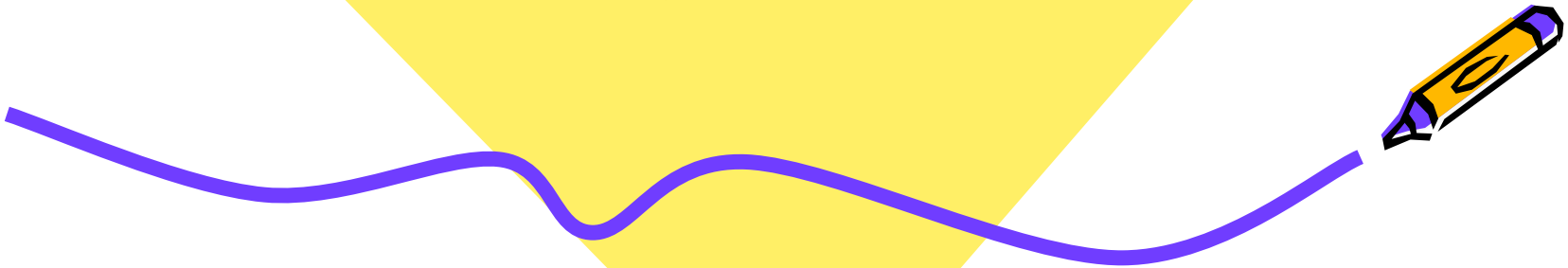


# Geometry

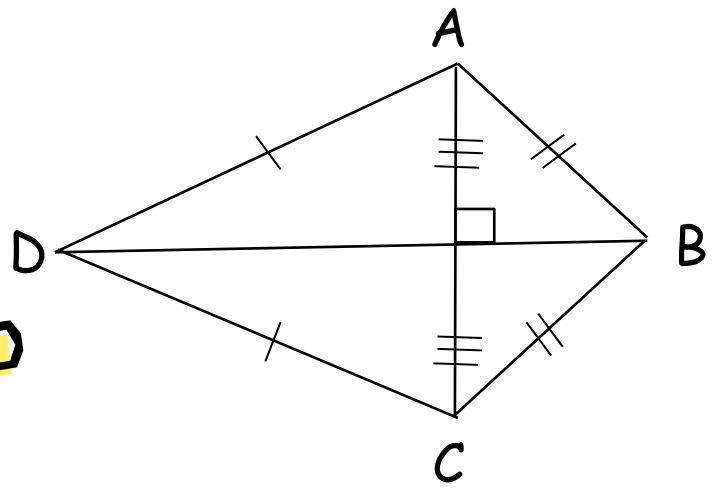
Kites



# Kites

- A kite is a quadrilateral with two pairs of consecutive sides that are congruent, but opposite sides are not congruent.
- The diagonals are perpendicular
- Exactly one diagonal is bisected
- Exactly one pair of opposite angles are congruent and exactly one pair of opposite angles are bisected

  (not the same pair)
- Like other quadrilaterals, the sum of the interior angles is 360.




$\angle DAB \cong \angle DCB$

$\angle ADC$ and $\angle ABC$ are bisected

(proven by SSS or HL, CPCTC)

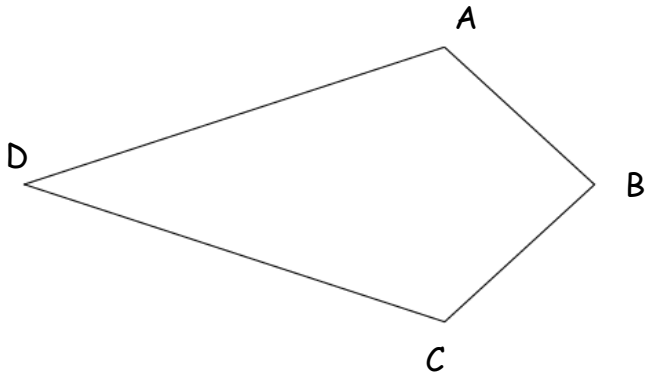
$m\angle A = 130$

$m\angle B = 2y + 10$

$m\angle C = 6x + 10$

$m\angle D = y$

Find x and y.



$AB = 65$

$AD = 6y - 2$

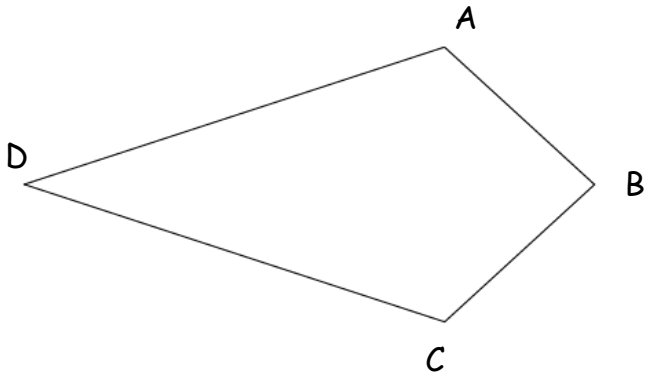
$BC = 5x + 5$

$DC = 70$

$m\angle D = 40^0$

Find x, y, AC, and DB.

Round to the tenth.



$AC = 50$

$m\angle D = 40^0$

$m\angle B = 130^0$

Find the perimeter of Kite ABCD.