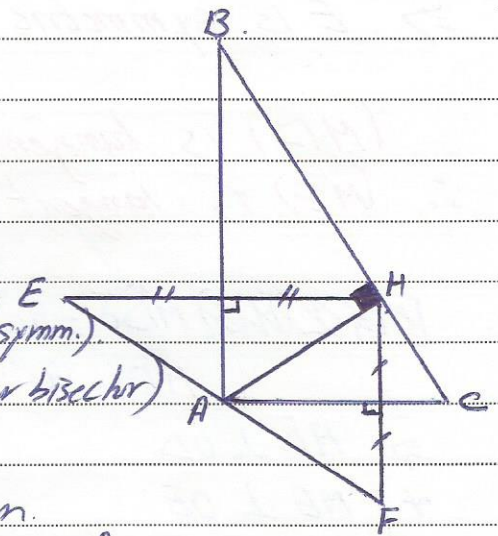


6<sup>th</sup> exercise.

1) Figure is drawn.

2) a. F symmetric of H w.r.t (AC) (given)

 $\Rightarrow$  (AC)  $\perp$  of [HF]. (property of axis of symm.) $\Rightarrow$  AH = AF. (property of Perpendicular bisector)

E is symmetric of H w.r.t (AB) given.

 $\Rightarrow$  (AB)  $\perp$  of [HE] (property of axis of symm.) $\Rightarrow$  AH = AE (property of perp. bisector). $\Rightarrow$  AH = AF = EA. (by subs.) $\Rightarrow$  A  $\in$  [EF]. $\therefore$  A is the center of circle circumscribed  
and  $\angle H F = 90^\circ$  (given). $\Rightarrow$  circle circumscribed about EHF is of diameter EF (inscribing diameter) $\therefore$  A is the center of circle circumscribed about EHF of diameter EF.b. ~~EF~~ is diameter of circle of center A  $\Rightarrow$  A, F + E are collinear.

3) AB = 6cm &amp; AC = 2cm.

a) In  $\triangle$  right triangle BAC at A. Use Pythagoras theorem

$$BC^2 = AB^2 + AC^2$$

$$= 36 + 4$$

$$= 40$$

$$BC = \sqrt{40} = 2\sqrt{10} \text{ cm.}$$

D-80.