

Name: key

Date:

Period:

HW #6-7

○ On a separate sheet of paper, complete #1-14 on pg. 328 of your textbook. on next pg...

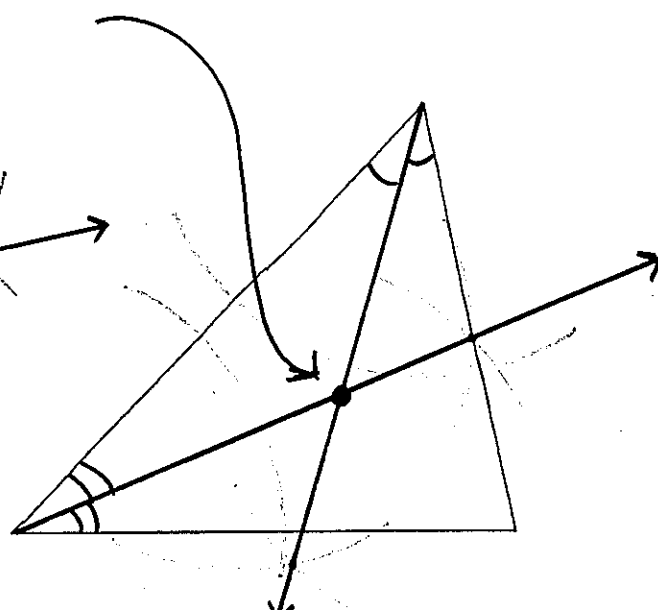
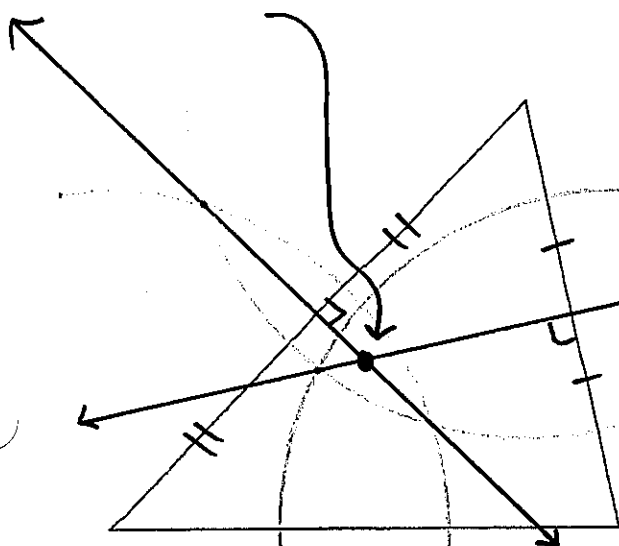
2. Fill in the table below.

Point of Concurrency	Intersection of the...	Location	Properties
Circumcenter	$\perp$ bisectors	Acute Δ : inside Right Δ : on hyp Obtuse Δ : outside	equidist. from vertices
Incenter	$\angle$ bisectors	Acute Δ : inside Right Δ : inside Obtuse Δ : inside	equidist. from sides
Centroid	medians	Acute Δ : } inside Right Δ : } Obtuse Δ : }	*centroid is $\frac{2}{3}$ of way from vertex to mdpt of opp side *balance point
Orthocenter	altitudes	Acute Δ : inside Right Δ : on rt. $\angle$ vertex Obtuse Δ : outside	

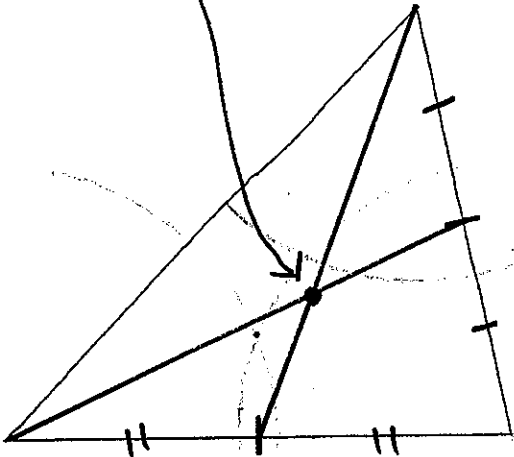
3. Which concurrent points are the same for an equilateral triangle? circumcenter, incenter, orthocenter
4. Complete the following constructions with a compass and straightedge.

a. Circumcenter

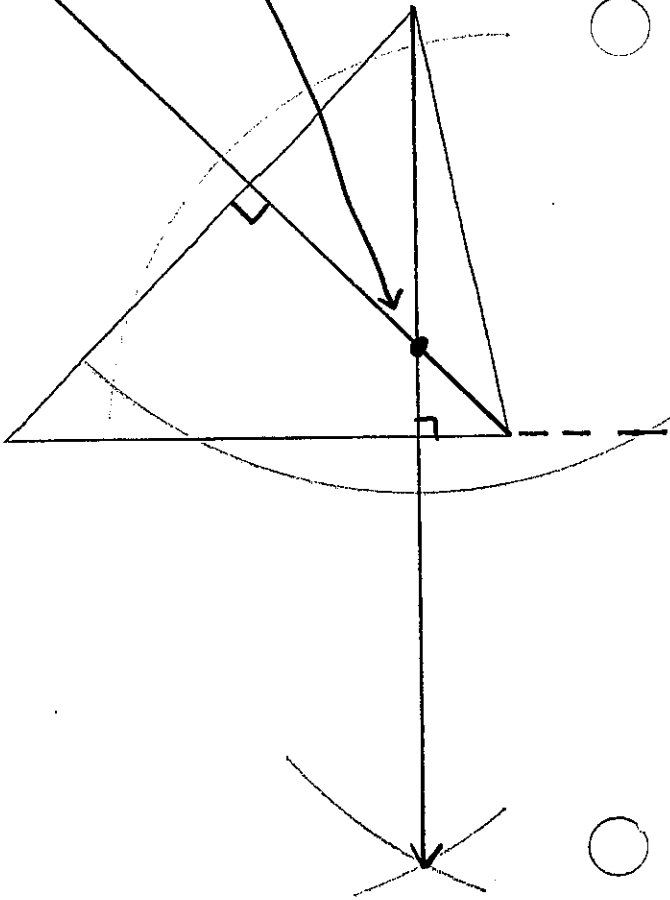
b. Incenter



c. Centroid



d. Orthocenter



- ① 15
- ② 18
- ③ 59°
- ④ $(-2, -1)$
- ⑤ $(7, 5)$
- ⑥ 11
- ⑦ 15
- ⑧ 26
- ⑨ $(3, 2)$
- ⑩ $(-4, -4)$
- ⑪ $(0, 4)$
- ⑫ $(7, -4)$
- ⑬ (a) incenter; $\angle$ bisectors
(b) $HL \cong$
(c) 2.8 cm
- ⑭ (a) centroid
(b) NO, the centroid is not equidistant from the vertices of a Δ . The committee should use the circumcenter.