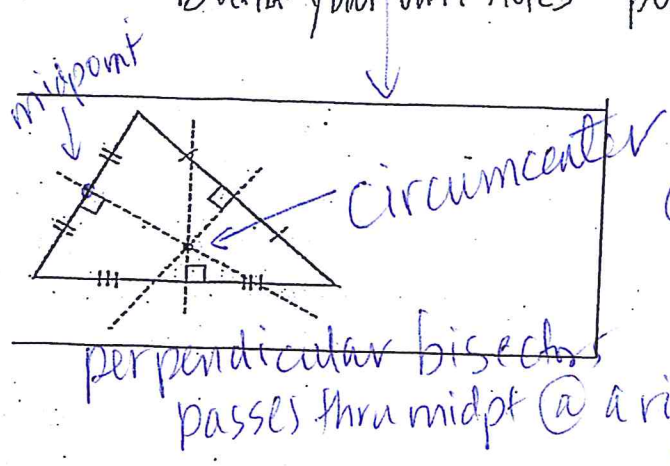


Build-your-own notes - points of concurrency

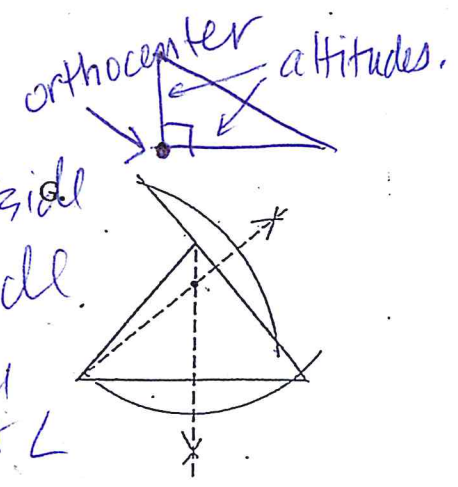
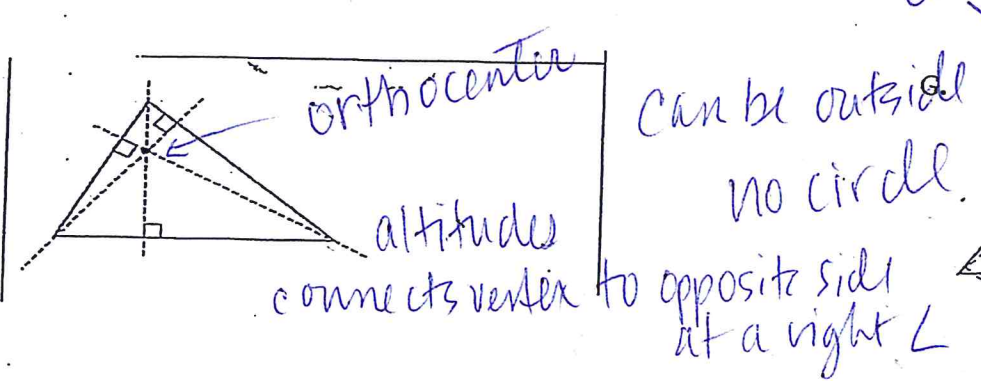
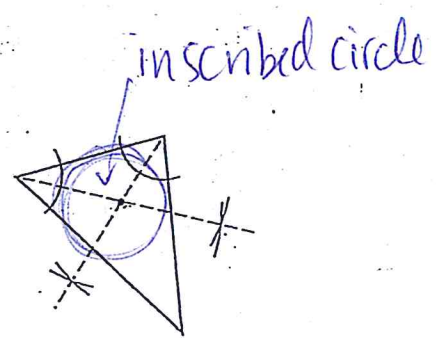
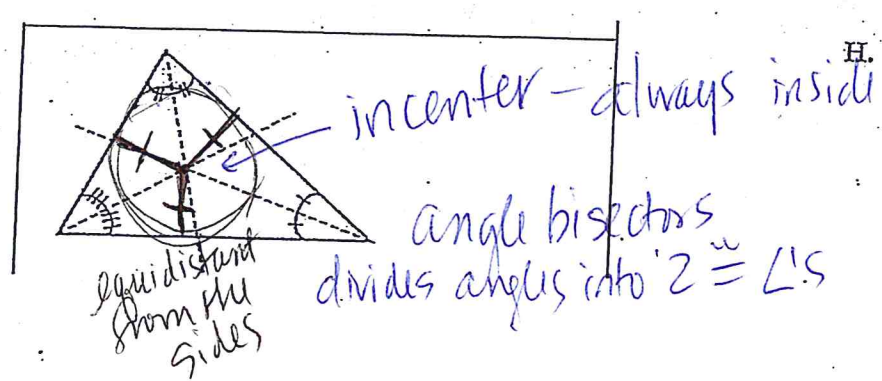
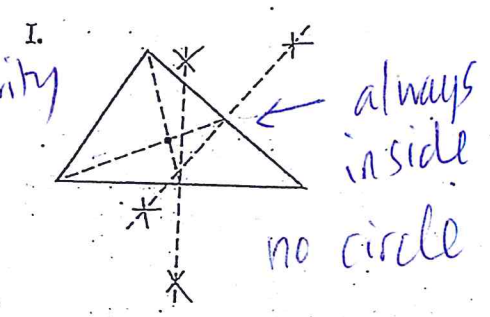
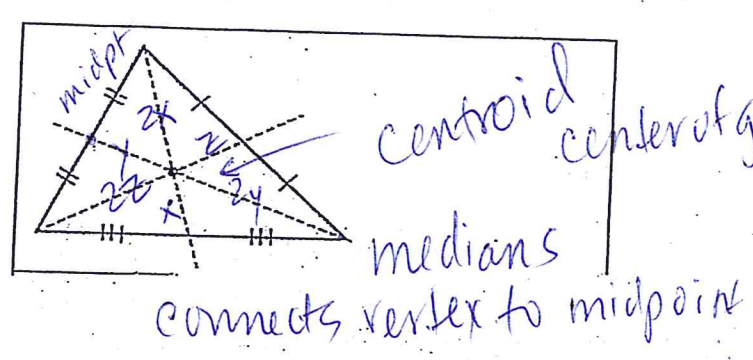
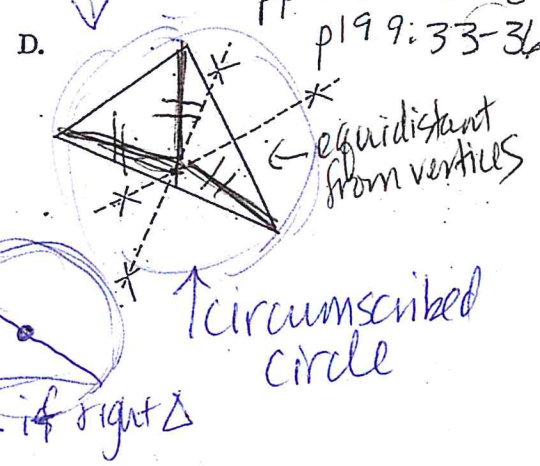
marked sketches

simulation of constructions
Add to review

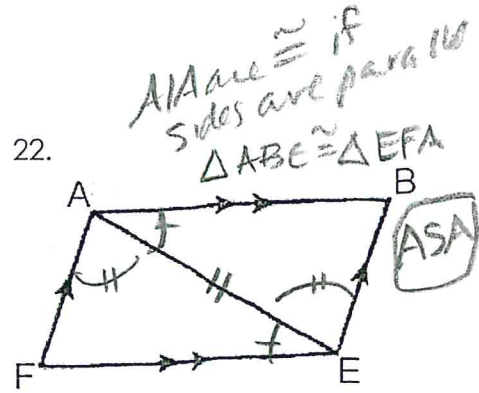
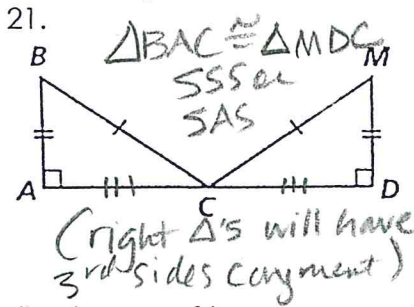
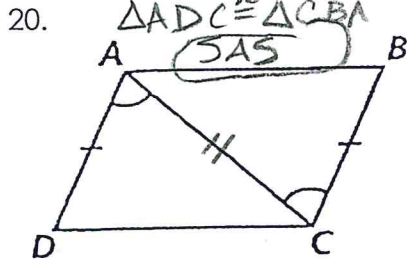
p 365:42
pp 196-7:8-18
p 199:33-36



can be outside

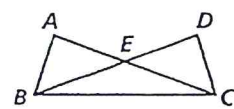


20-22: By what method can the triangles be proven congruent? Write a congruent statement for the triangles.



23. Reorder the reasons of the following proof to match the correct statements.

- 1) c) \rightarrow v
2) e)
3) B)
4) a)
5) d)



Given: $\overline{AB} \cong \overline{DC}$
 $\angle ABC \cong \angle DCB$
Prove: $\overline{AC} \cong \overline{DB}$

- Statements
- $\overline{AB} \cong \overline{DC}$
 - $\angle ABC \cong \angle DCB$
 - $\overline{BC} \cong \overline{CB}$
 - $\triangle ABC \cong \triangle DCB$
 - $\overline{AC} \cong \overline{DB}$

- Reasons
- SAS Postulate
 - Reflexive Property
 - Given
 - CPCTC
 - Given

24. The vertex angle of an isosceles triangle is three times the measure of a base angle. What is the measure of the vertex angle?



$$5x = 180$$

$$x = 36^\circ$$

$$3 \cdot 36 = 108^\circ$$

25. Two sides of a triangle are 4 cm and 9 cm. What are possible lengths for the third side?

$$5 \text{ cm} < \text{side length} < 13 \text{ cm}$$

26. Can a triangle be formed with side lengths that are 4, 9, and 12? Explain.

$$\text{yes } 4 + 9 > 12$$

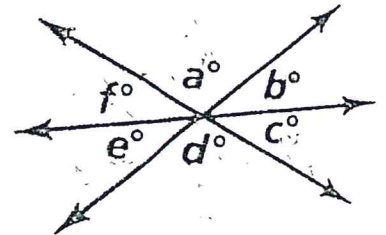
27. If the perimeter of isosceles triangle XYZ is 40 and $XZ = 16$, what are the possible values for YZ ?



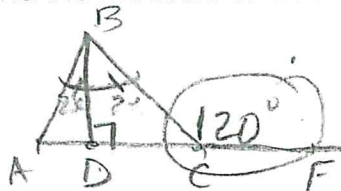
28. Give the diagram at the right, which of the following must be true?

- $e + f = b + c$
- $f + c = a + d$
- $e + a + c = f + b + d$

- A. I only B. I and III C. I and II D. I, II, and III



29. $\triangle ABC$ is an acute triangle. $\overline{BD} \perp \overline{AC}$ and \overline{BD} bisects $\angle ABC$. $m\angle CBD = 2x$, and $m\angle ABD = 4x - 30$. Draw a figure and find the measure of exterior angle BCF .



$$2x = 4x - 30$$

$$30 = 2x$$

$$x = 15$$

