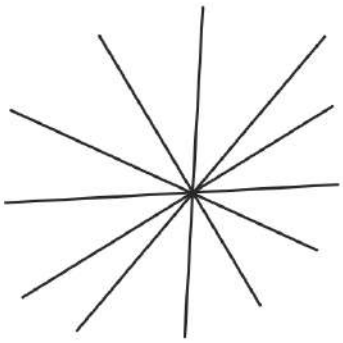
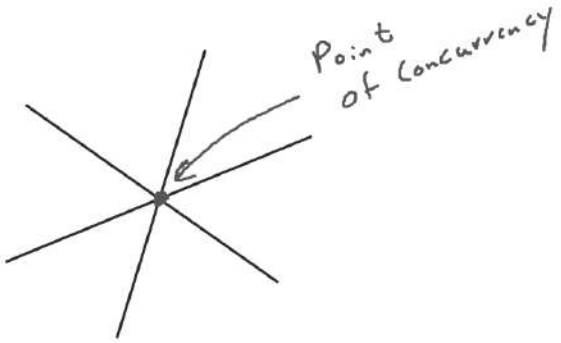
Concurrent Lines

3 or more lines that intersect at the same point



Points of Concurrency

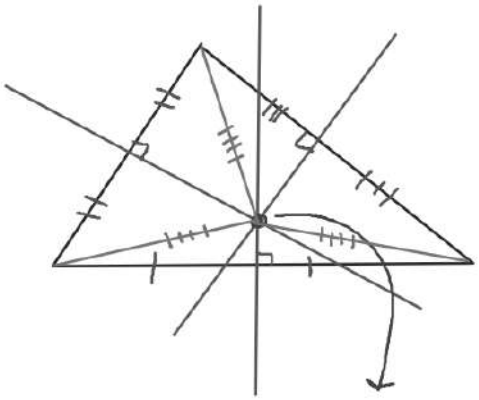
The point where concurrent lines Intersect



Circumcenter – Point of Concurrency

– 3 perpendicular Bisector Intersect

– Same distance to each verbice of the △.



Circumcenter

— Acute △ – Circumcenter is inside △

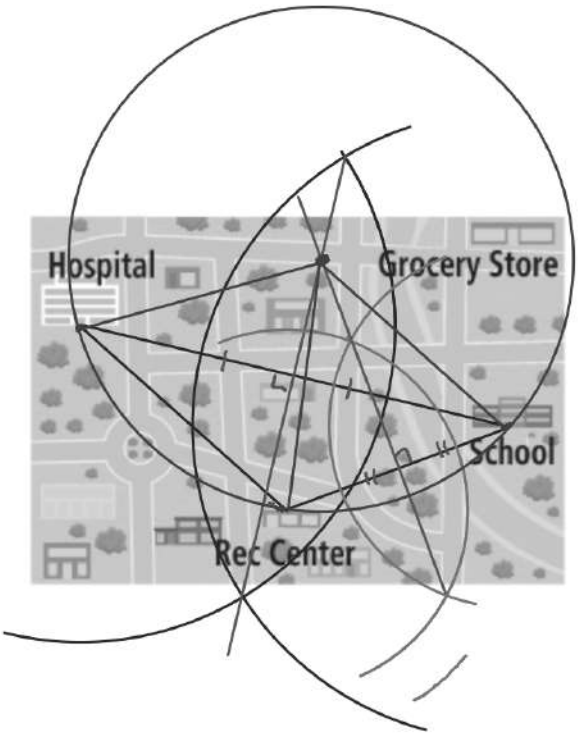
— obtuse △ – Circumcenter is outside △

— Right △ – Circumcenter is at the midpoint of the hypotenuse

A city manager wants to place a new emergency siren so that it is the same distance from the school, hospital, and recreation center. Where should the emergency siren be placed?

Circumcenter

SOLUTION



In the diagram, the perpendicular bisectors (shown with dashed segments) of ΔABC meet at point G--the *circumcenter*. and are shown dashed. Find the indicated measure.

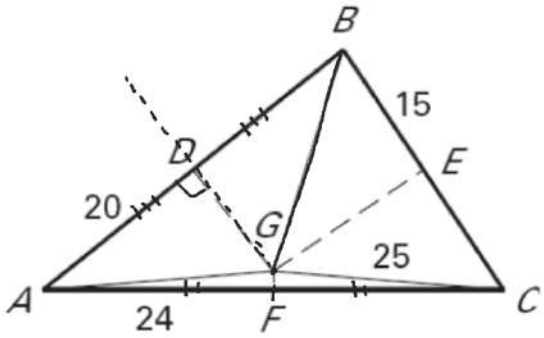
11. AG = 25 12. BD = 20

13. CF = 24 14. AB = 40

15. CE = 15 16. AC = 48

17. m∠ADG = 90°

18. IF BG = (2x – 15), find x.



AG = BG = GC