

2014-10-07

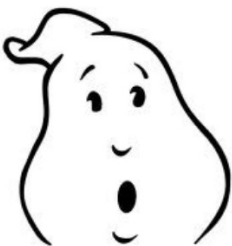
Chapter 3.4

Constructions

Today we will learn to construct
Angle Bisectors.

Please take out your **compass** and **straight edge!**

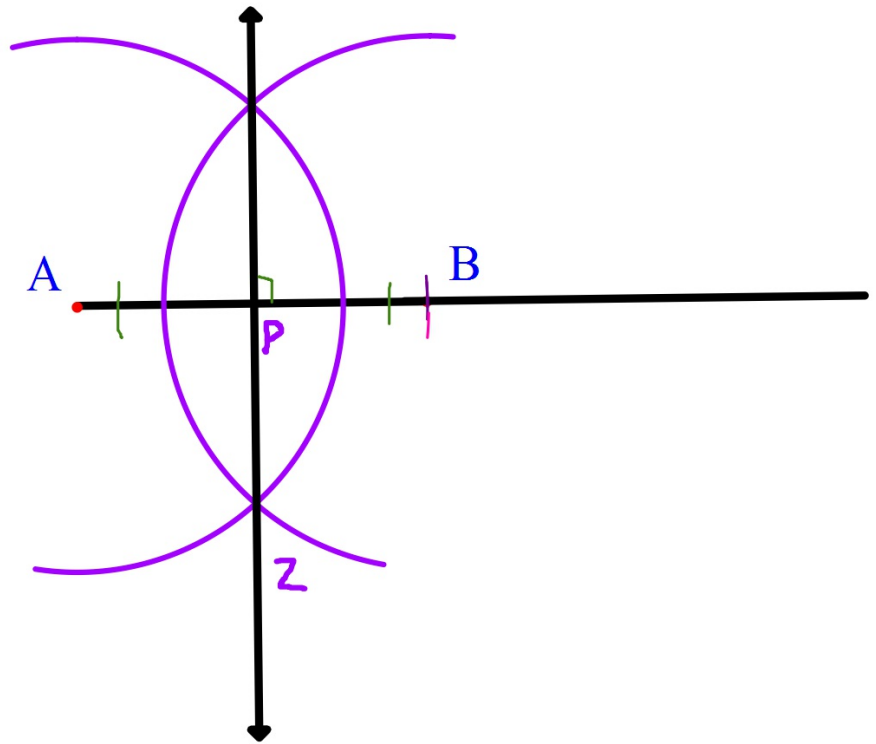
Get out Textbooks and Comp Books!

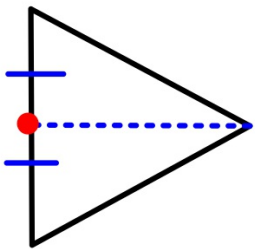
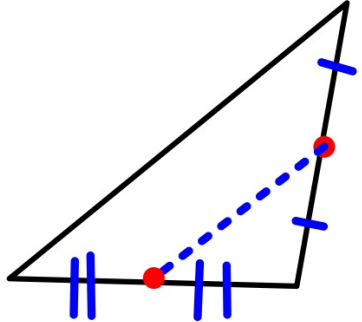


Quiz Tomorrow!

Warm-up:

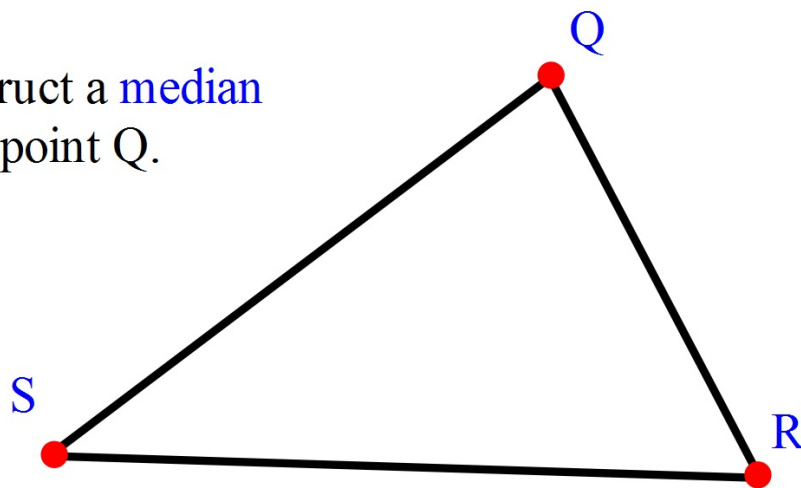
Copy \overline{AB} into your comp book and create the perpendicular bisector.



Term	Definition	Picture
Median	line segment connecting a vertex to the midpoint of its opposite side	
Midsegment	line segment connecting a midpoint of one side to the midpoint of another side	

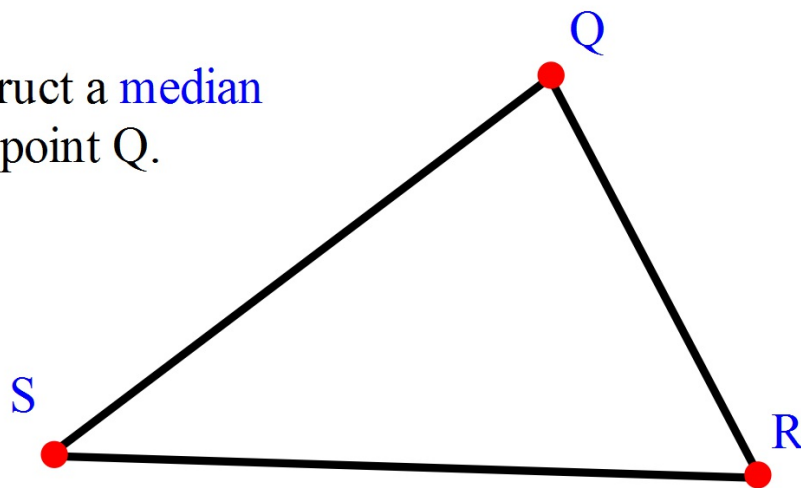
Sketch (with a straight edge!)
 $\triangle SQR$.

Construct a **median**
from point Q.



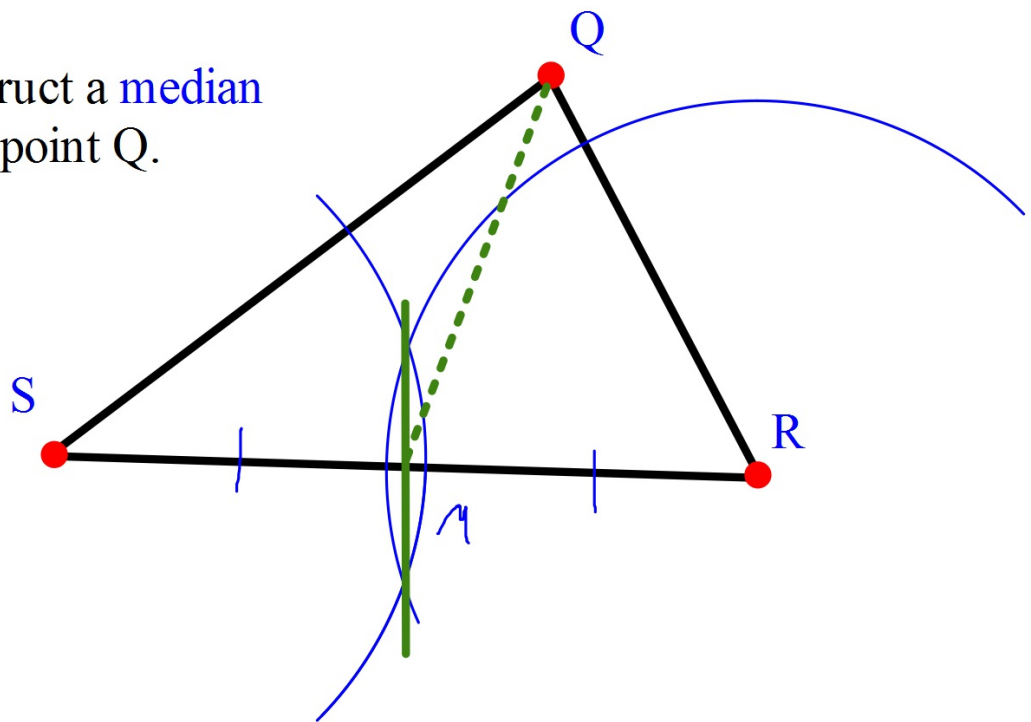
Sketch (with a straight edge!)
 Δ SQR.

Construct a **median**
from point Q.



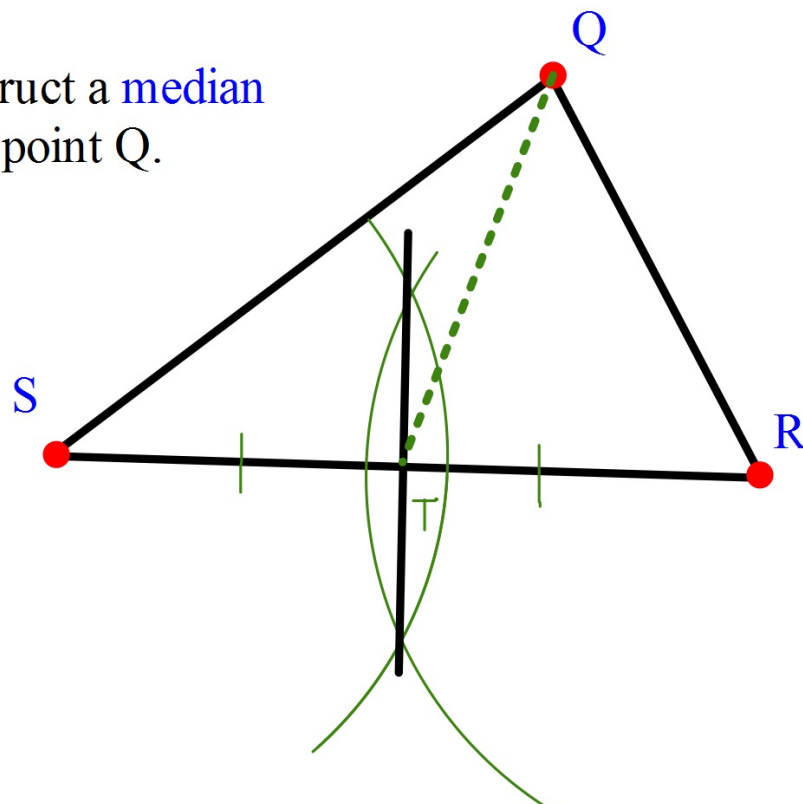
Sketch (with a straight edge!)
 Δ SQR.

Construct a **median**
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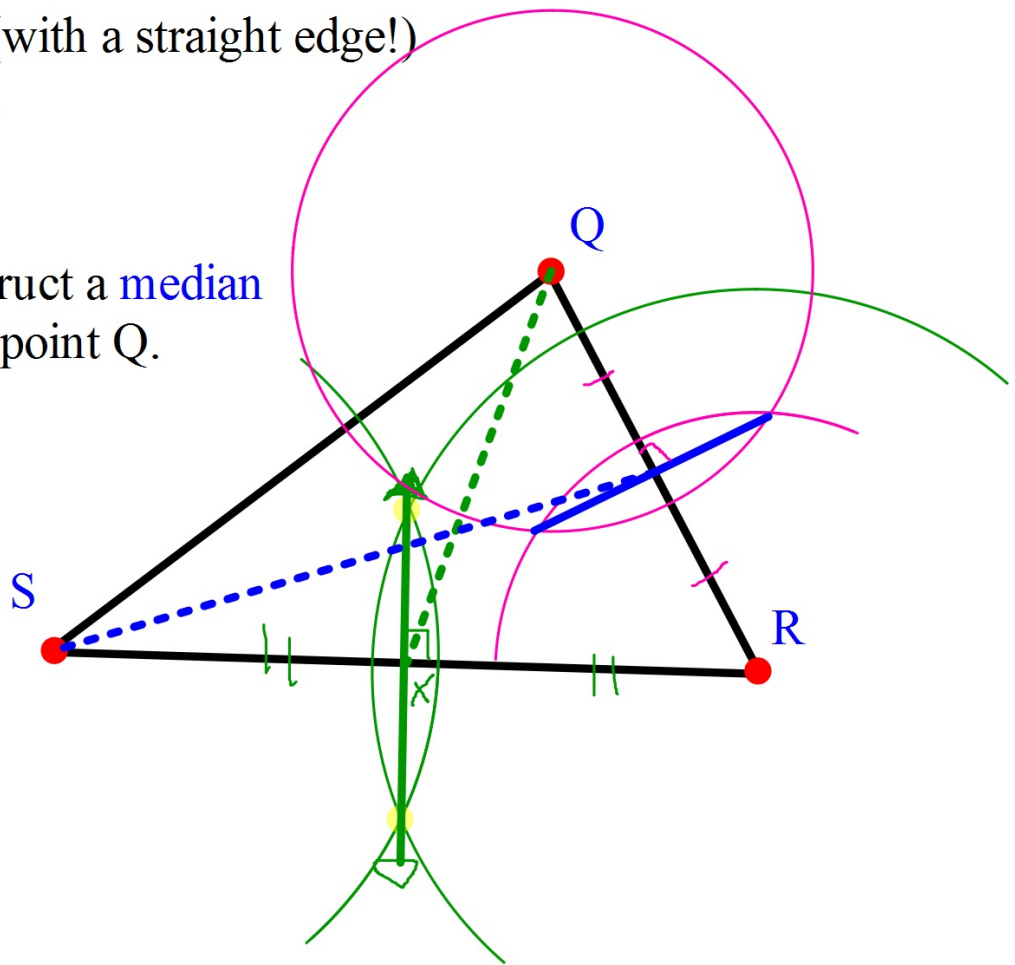
Sketch (with a straight edge!)
 Δ SQR.

Construct a **median**
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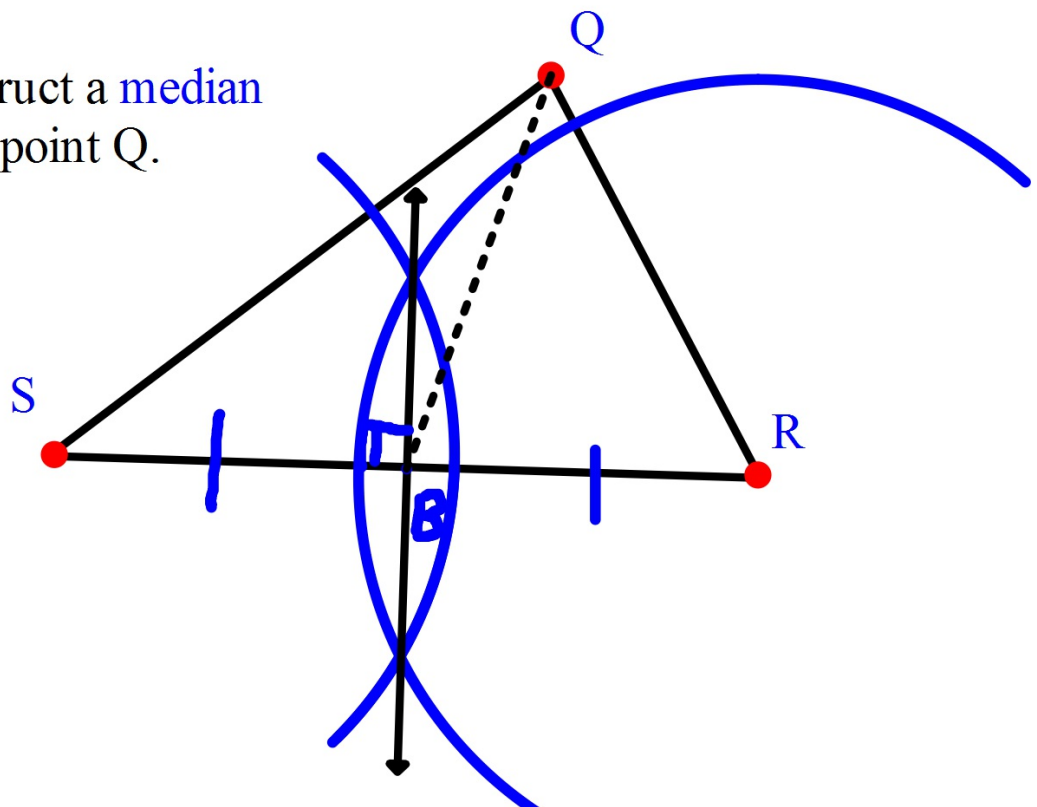
Sketch (with a straight edge!)
 ΔSQR .

Construct a **median**
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Sketch (with a straight edge!)
 ΔSQR .

Construct a **median**
from point Q.



Construct a line through P perpendicular to l

• P

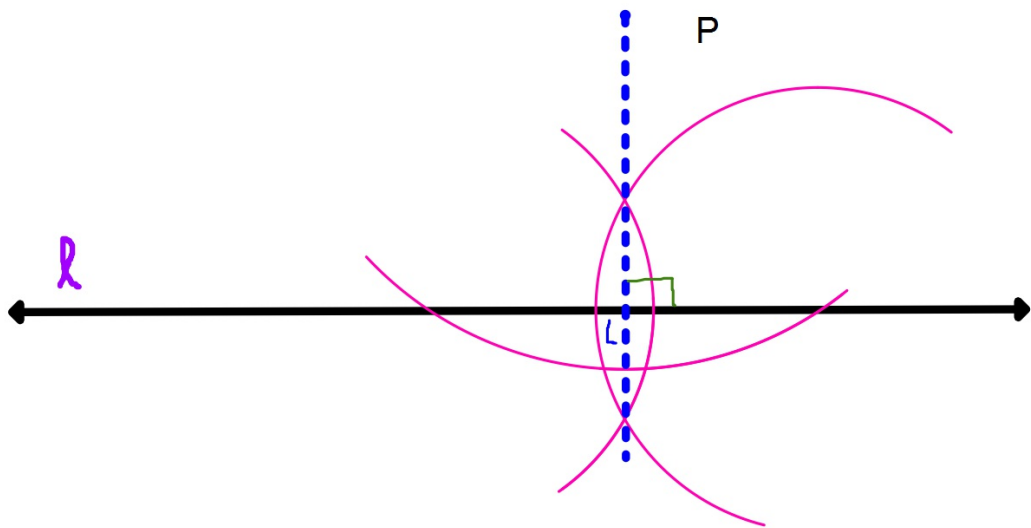


Construct a line through P perpendicular to l

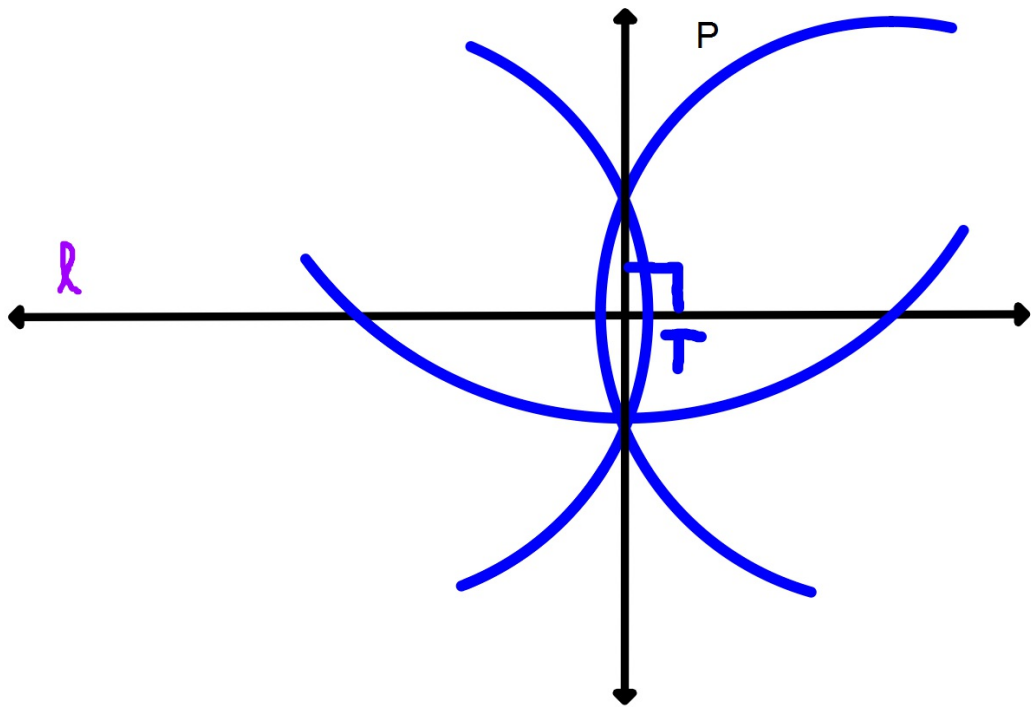
• P



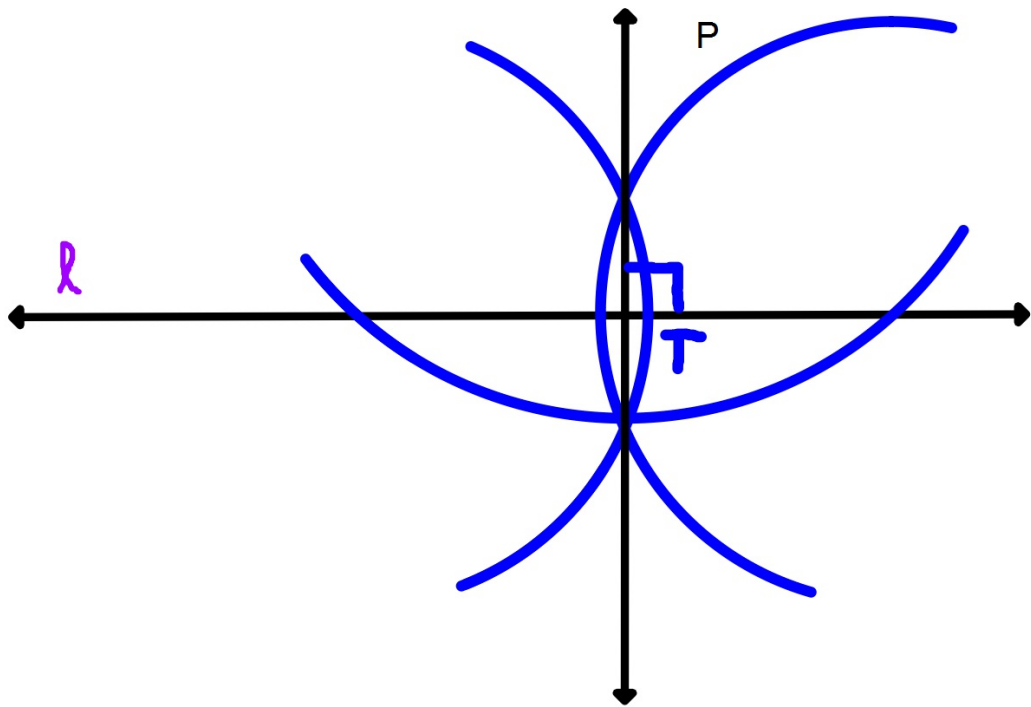
Construct a line through P perpendicular to l



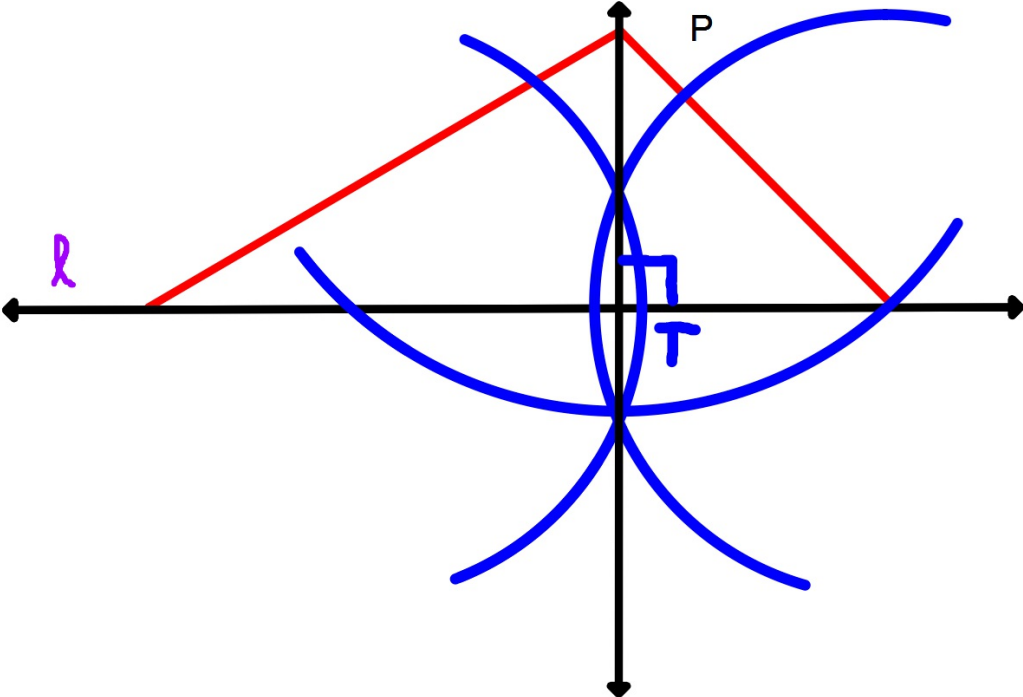
Construct a line through P perpendicular to l

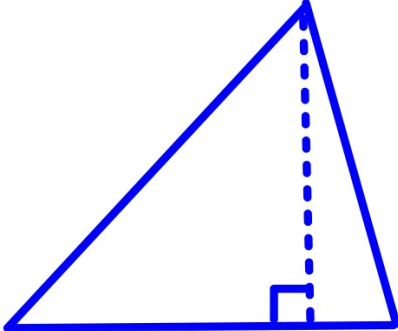


Construct a line through P perpendicular to l

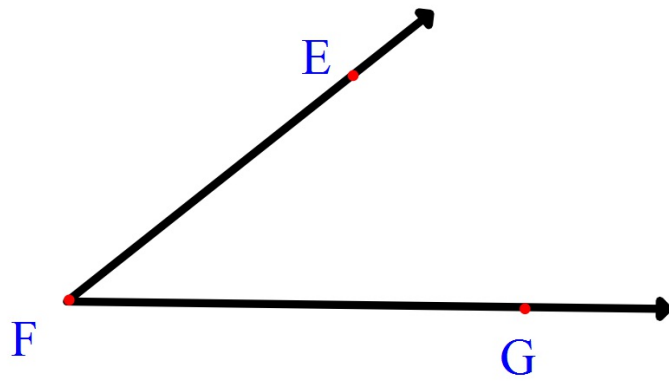


Construct a line through P perpendicular to l

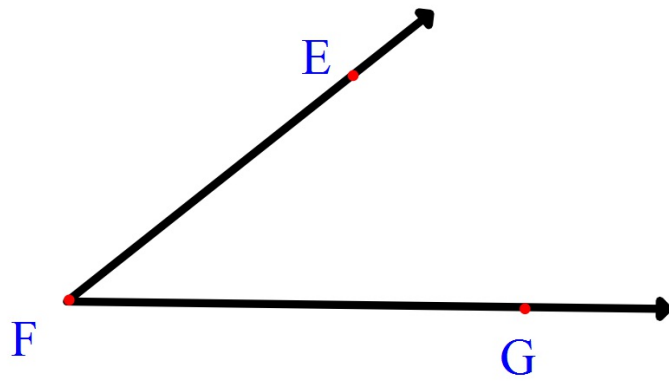


Term	Definition	Picture
Altitude	a perpendicular line segment connecting a vertex to the opposite side	 A diagram of a triangle with a dashed vertical line segment representing an altitude. The altitude starts at the top vertex and ends at the bottom side, perpendicular to it. A small square at the intersection indicates the right angle.

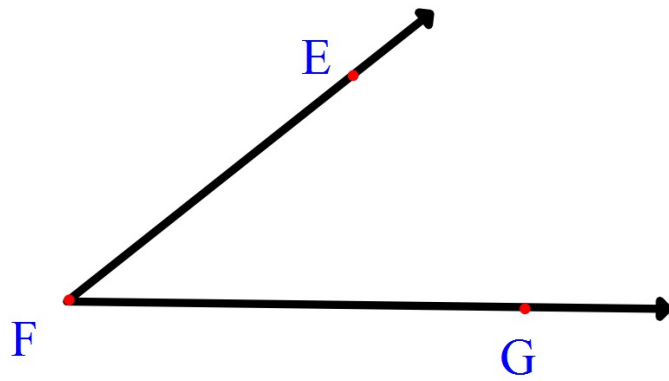
Construct $\angle EFG$, and then construct the *angle bisector* of $\angle EFG$.



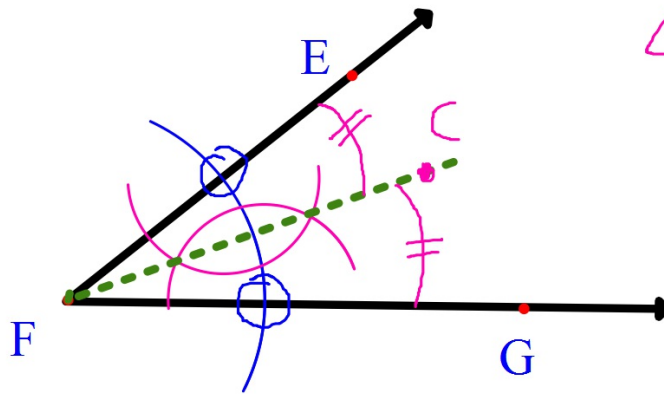
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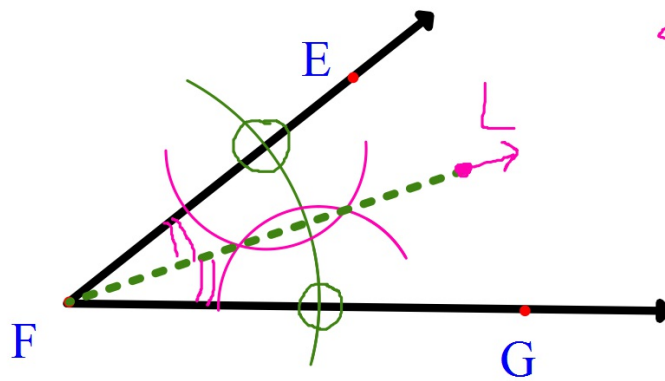
Construct $\angle EFG$, and then construct the *angle bisector* of $\angle EFG$.



$$\angle EFC \cong \angle GFC$$

\rightarrow FC bisects $\angle EFG$

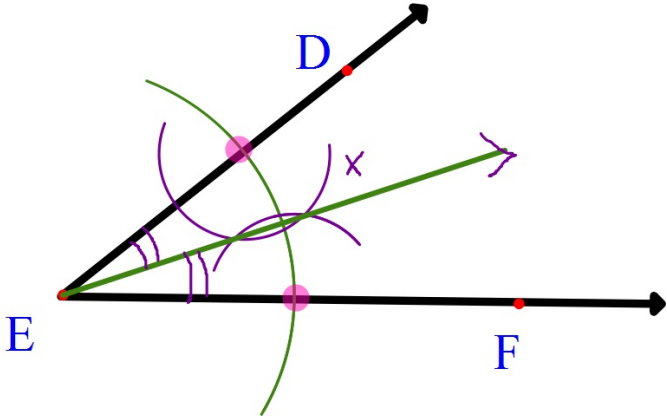
Construct $\angle EFG$, and then construct the *angle bisector* of $\angle EFG$.



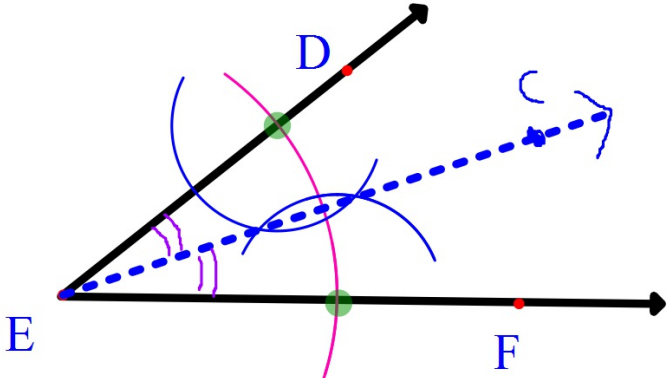
$$\angle EFL \cong \angle LFG$$

\overrightarrow{FL} is an angle bisector of $\angle EFG$

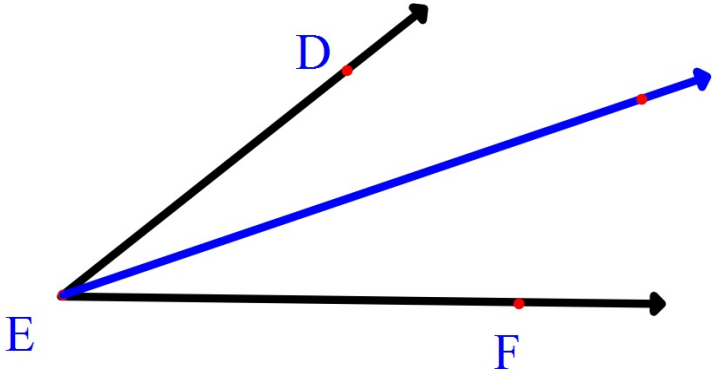
Construct $\angle DEF$, and then construct the *angle bisector* of $\angle DEF$.



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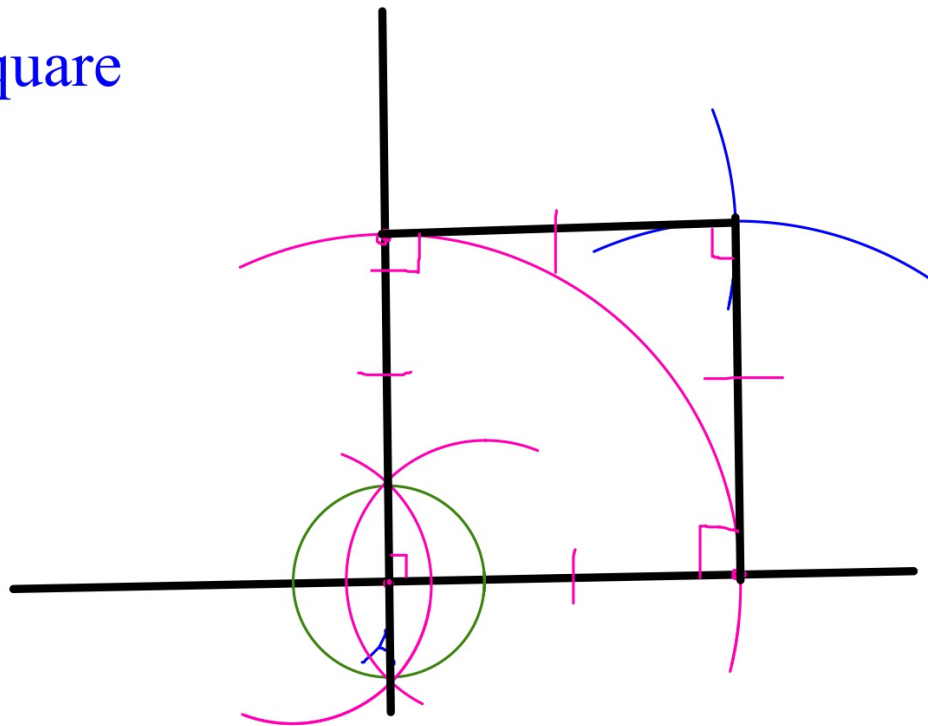
Construct $\angle DEF$, and then construct the *angle bisector* of $\angle DEF$.



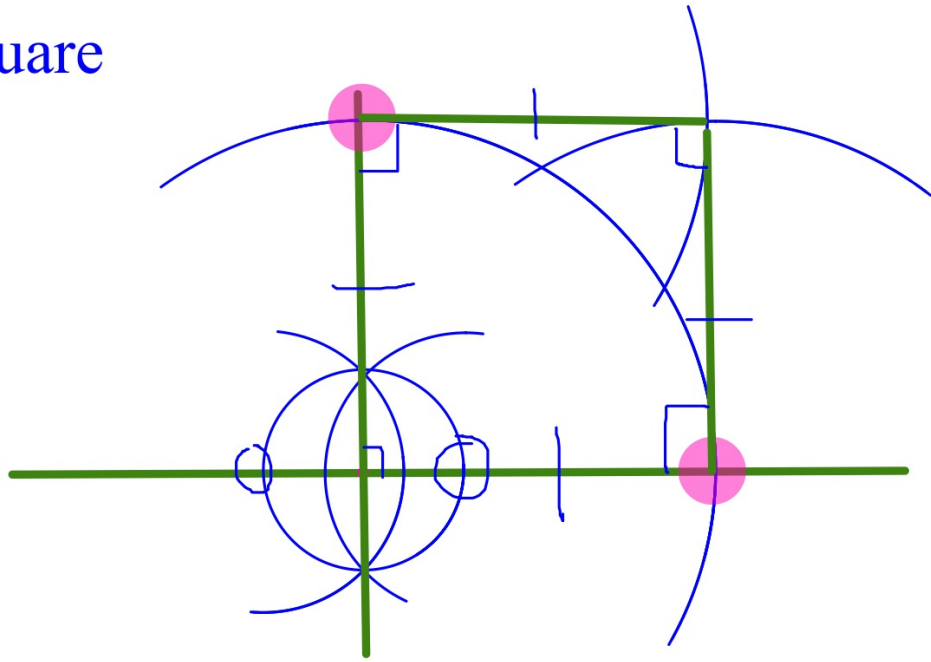
Square

Square

Square



Square



HW: p. 160 #1-10, 13-16

Quiz tomorrow! Bring a compass!

Quiz Topics:

Construction of:

- segments
- angles
- perpendicular bisectors
- perpendicular lines
- altitudes
- medians
- midsegment

Investigation #2 p. 160

Steps 1-4

Work in pairs!

