

2014-10-06

Chapter 3.3

Constructions

Objective: To perform basic constructions today.

Today we will learn to construct
perpendicular lines from a point to lines and segments.

Please take out your compass and straight edge!

Get out Textbooks and Comp Books!



Quiz Wednesday 3.1-3.3!

Quiz Practice!

Make sure all construction marks are clearly visible !

1. Copy the angle into your compbook.
2. Construct an angle that is twice as large.
3. Copy line segment AB into your compbook.
4. Construct the perpendicular bisector of AB.
5. Construct a new line segment FG that has a measure $FG = 2AB - CD$.

Work as a group. 10 minutes.

Review:

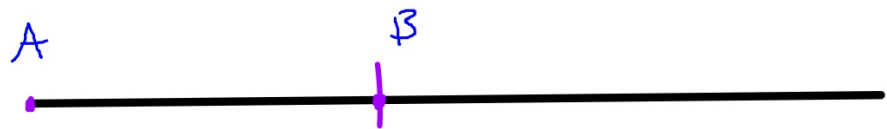
Create a line segment \overline{AB} . Then construct a Line Segment that is congruent \overline{AB} .



Review:

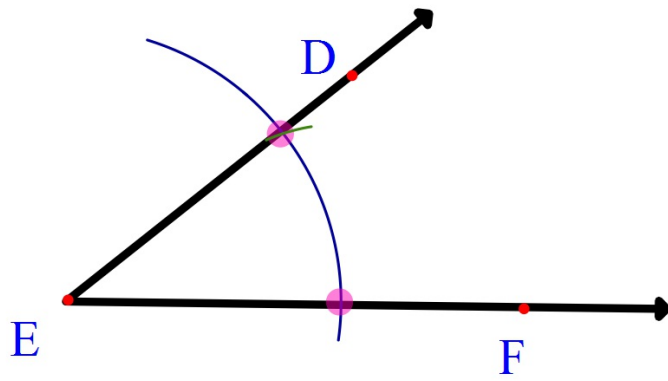
Create a line segment \overline{AB} . Then construct a Line Segment that is congruent \overline{AB} .

3.



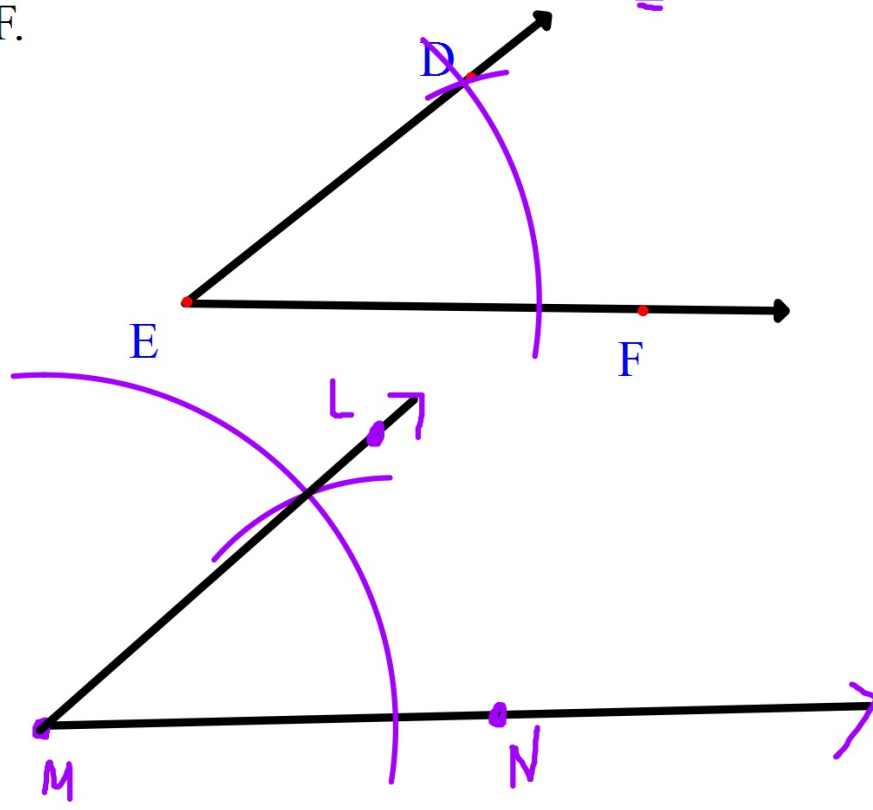
Review:

Construct $\angle DEF$, and then construct $\angle LMN$ that is congruent to $\angle DEF$.



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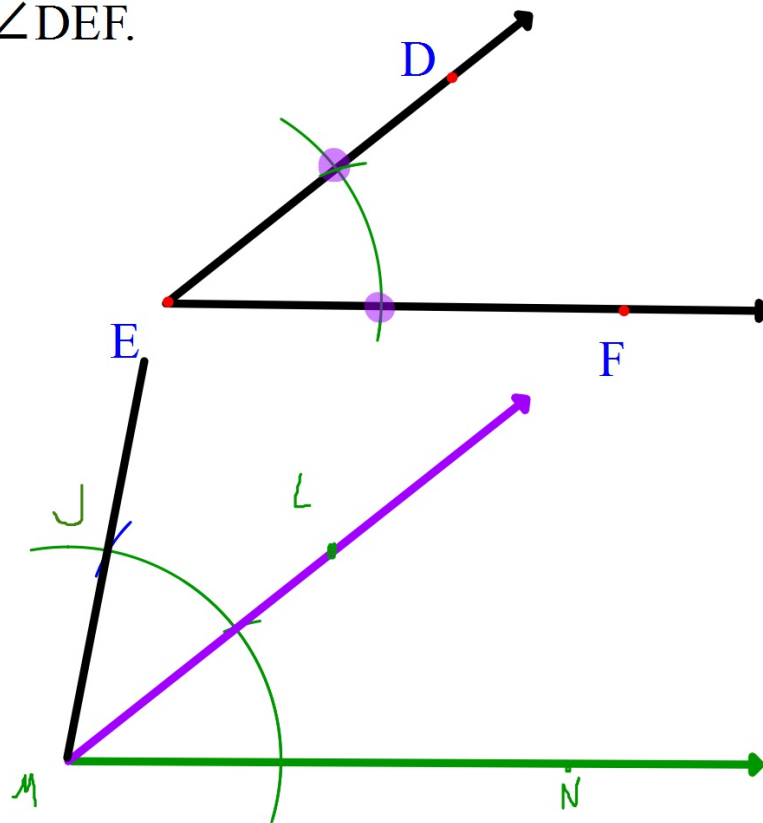


1.

Review:

Construct $\angle DEF$, and then construct $\angle JMN$ that is twice as large as $\angle DEF$.

2.



Review:

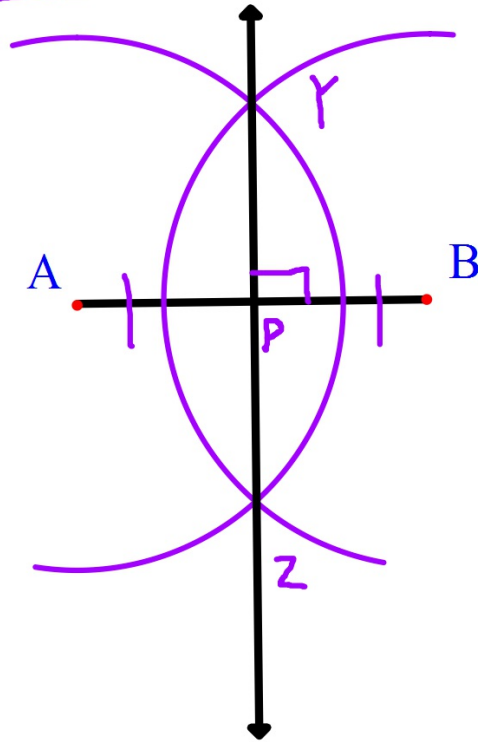
Create a line segment \overline{AB} . Then construct a line \overleftrightarrow{YZ} that is the Perpendicular Bisector of \overline{AB} .



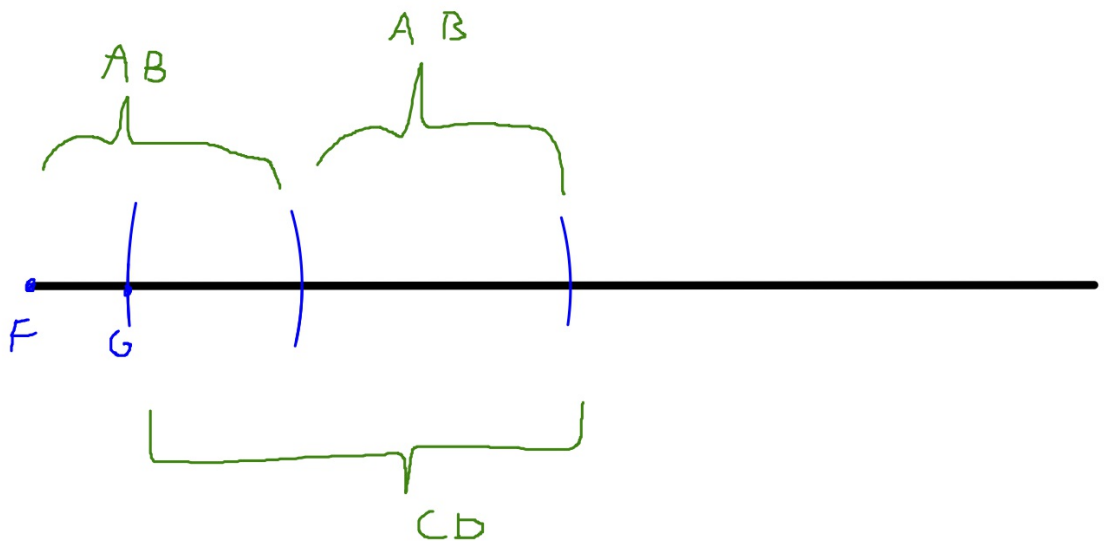
Review:

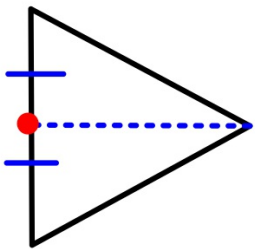
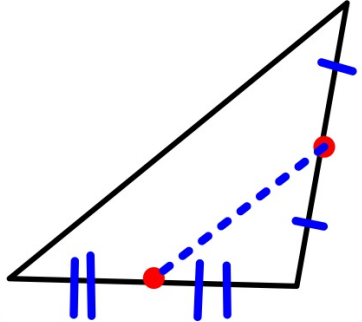
Create a line segment \overline{AB} . Then construct a line \overleftrightarrow{YZ} that is the Perpendicular Bisector of \overline{AB} .

4.



5. Construct a new line segment FG that has a measure $FG = 2AB - CD$.

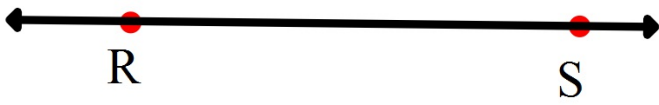


Term	Definition	Picture
Median	line segment connecting a vertex to the midpoint of its opposite side	
Midsegment	line segment connecting a midpoint of one side to the midpoint of another side	

Investigation #1 p. 154

Steps 1-5 (including Conjecture)

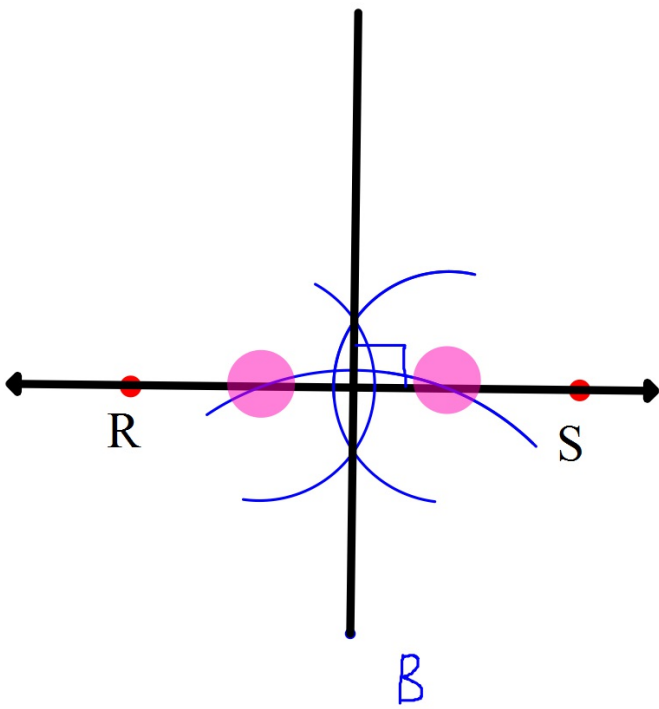
Work TOGETHER!





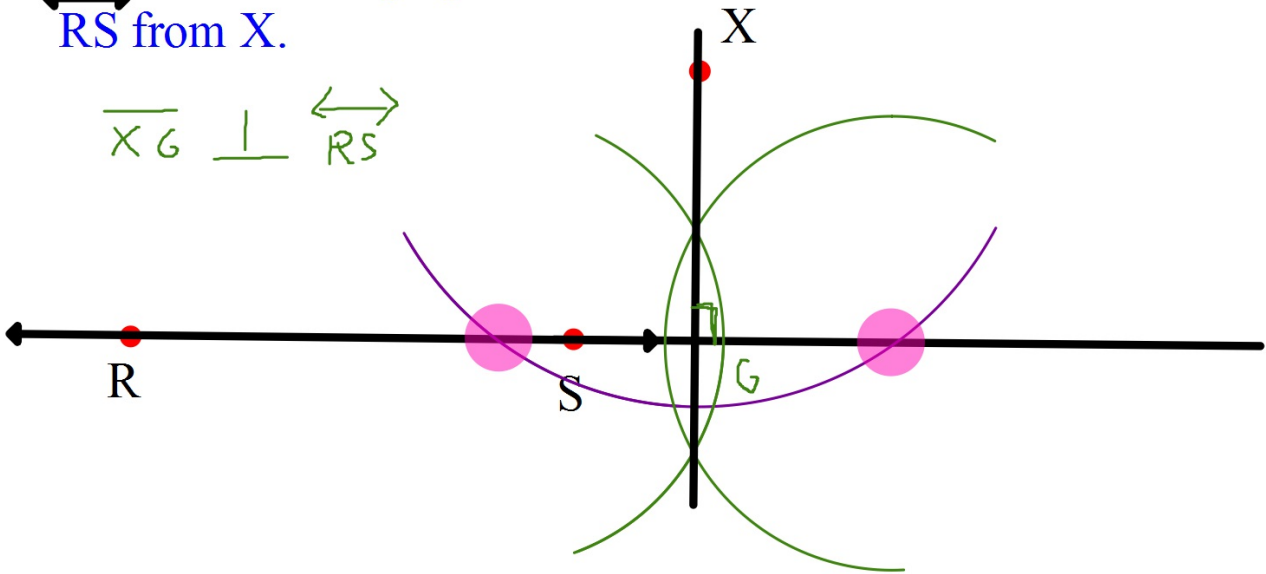
Perpendicular to a point



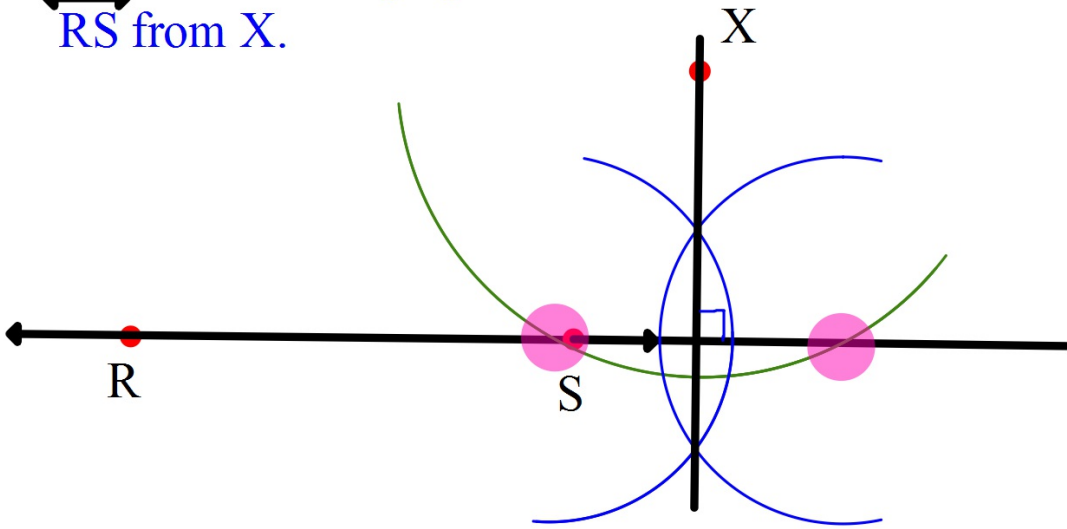


Construct a line perpendicular to
RS from X.

$$\overline{XG} \perp \overleftrightarrow{RS}$$

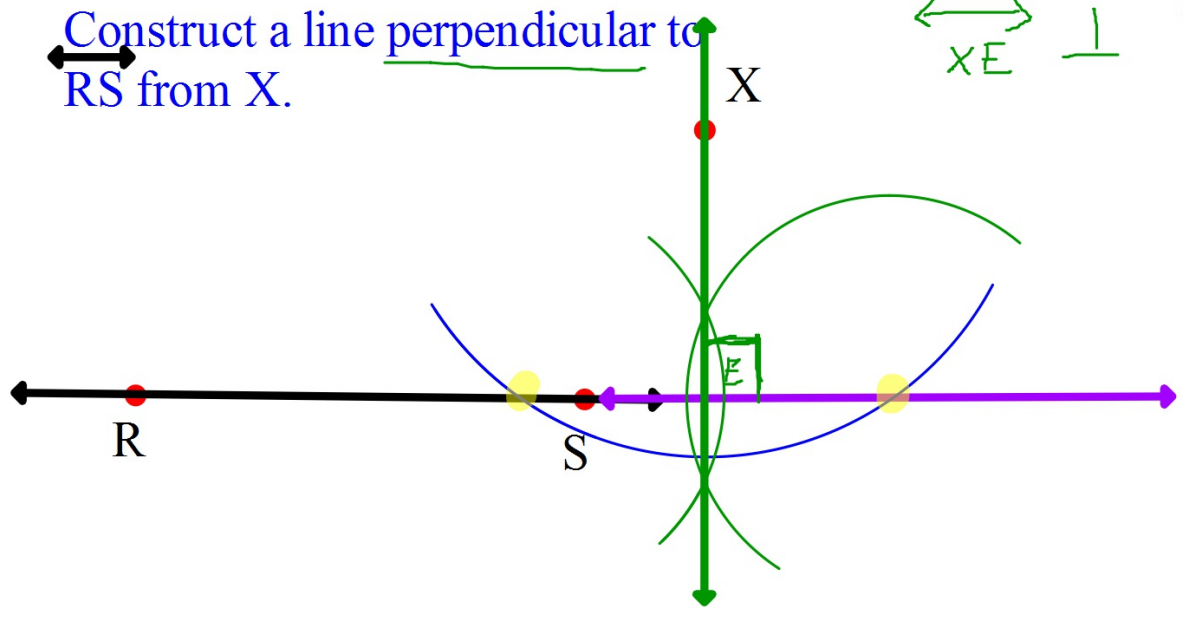


Construct a line perpendicular to RS from X.

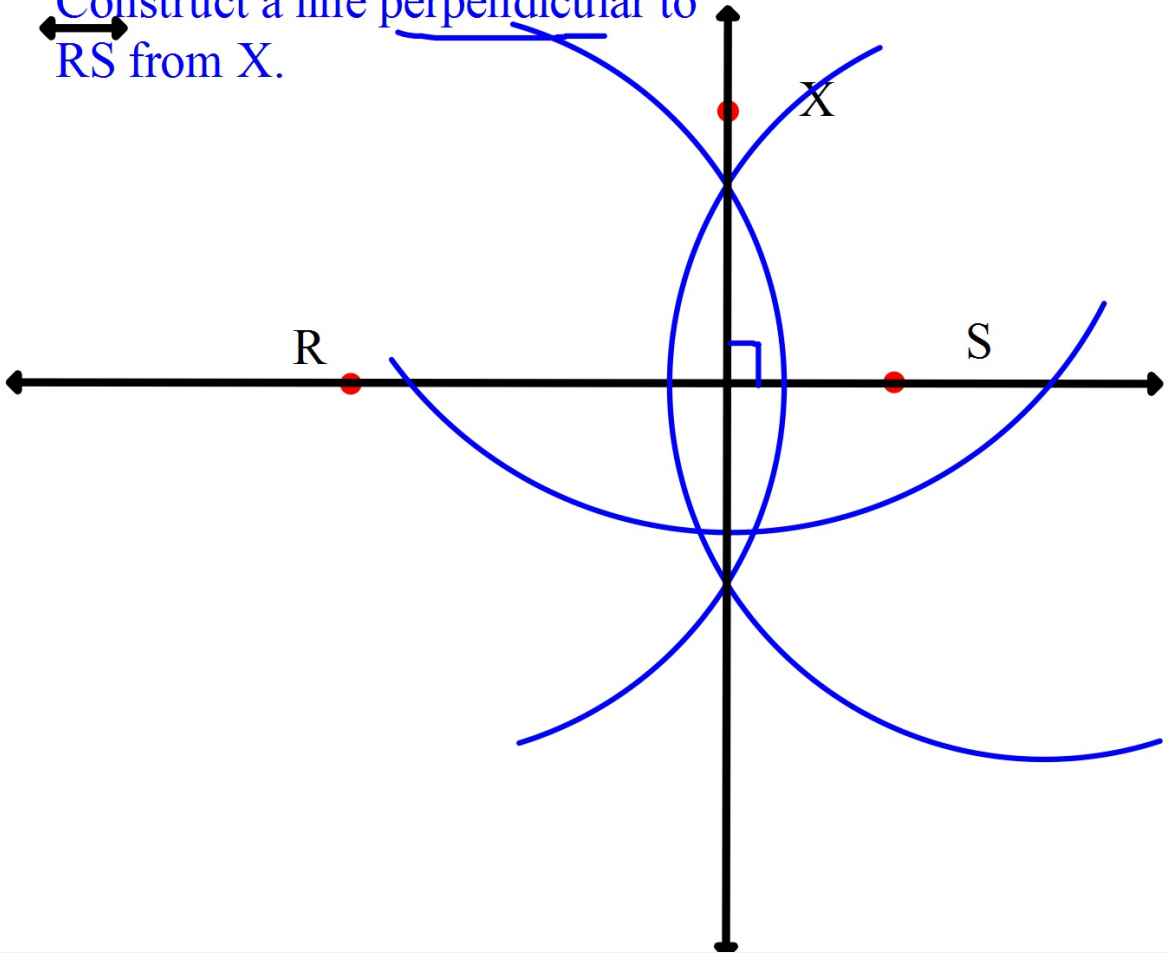


Construct a line perpendicular to RS from X.

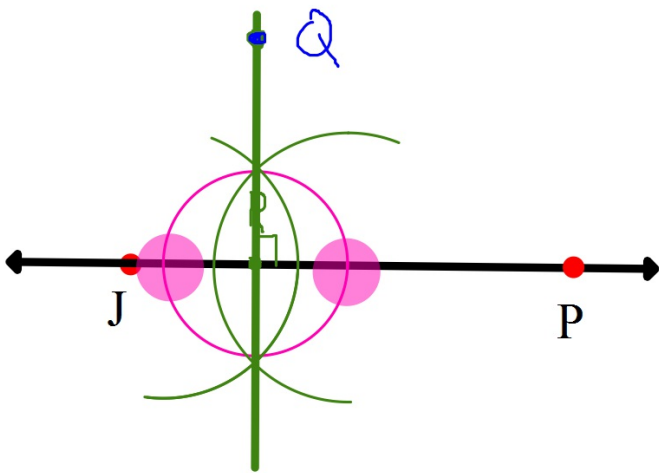
$\overleftrightarrow{XE} \perp \overleftrightarrow{RS}$



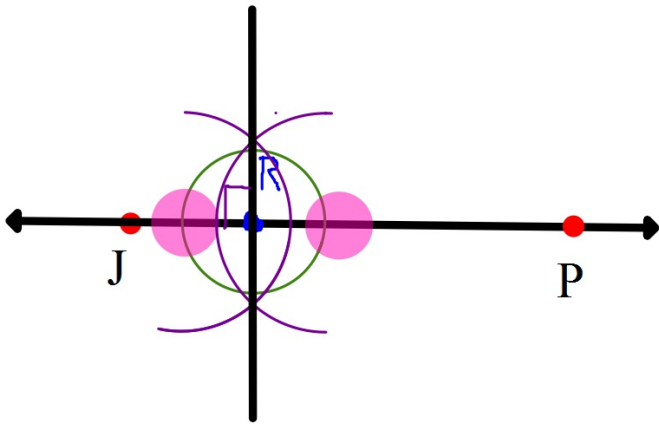
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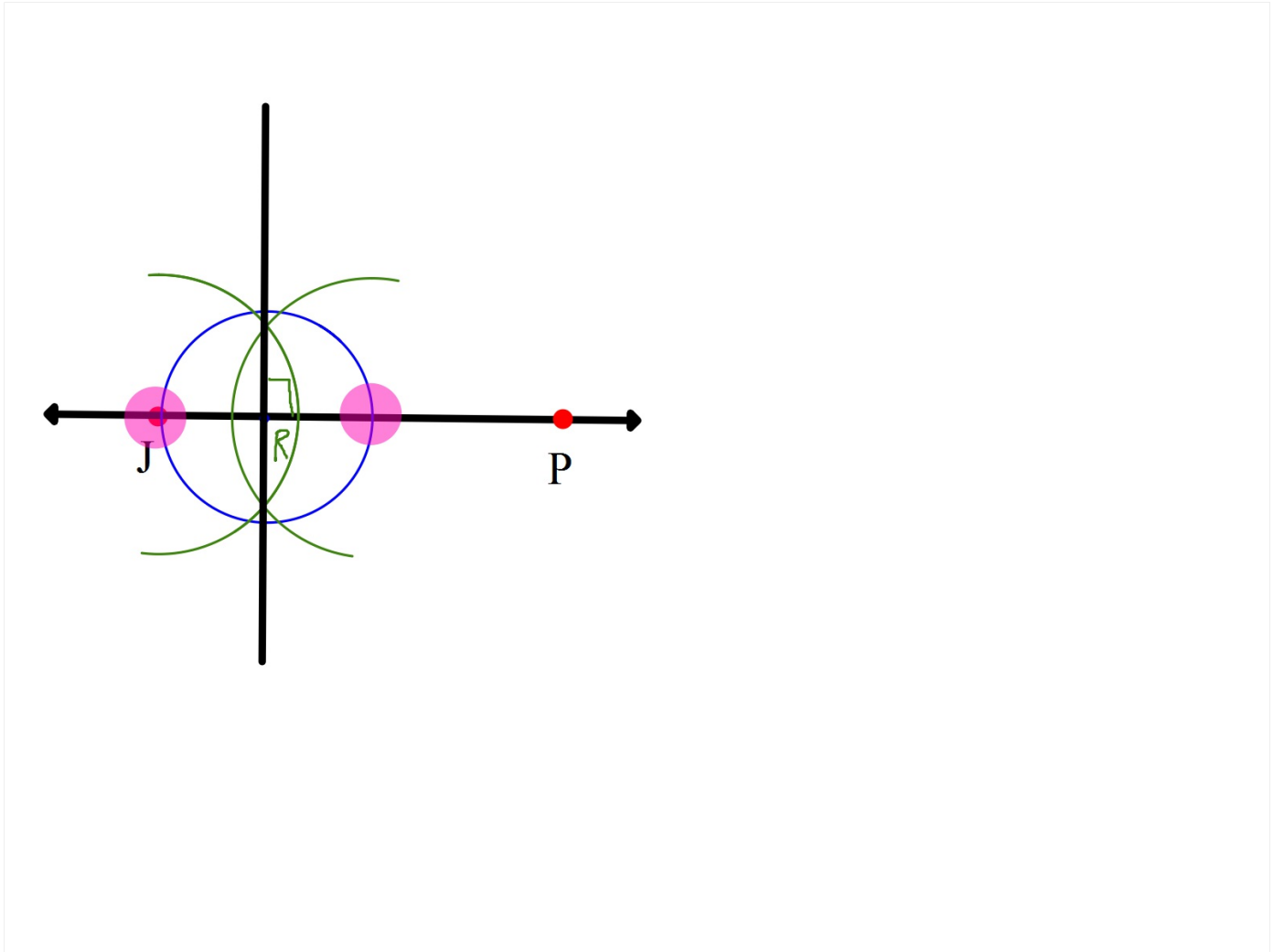


$$\overline{QR} \perp \overleftrightarrow{JP}$$



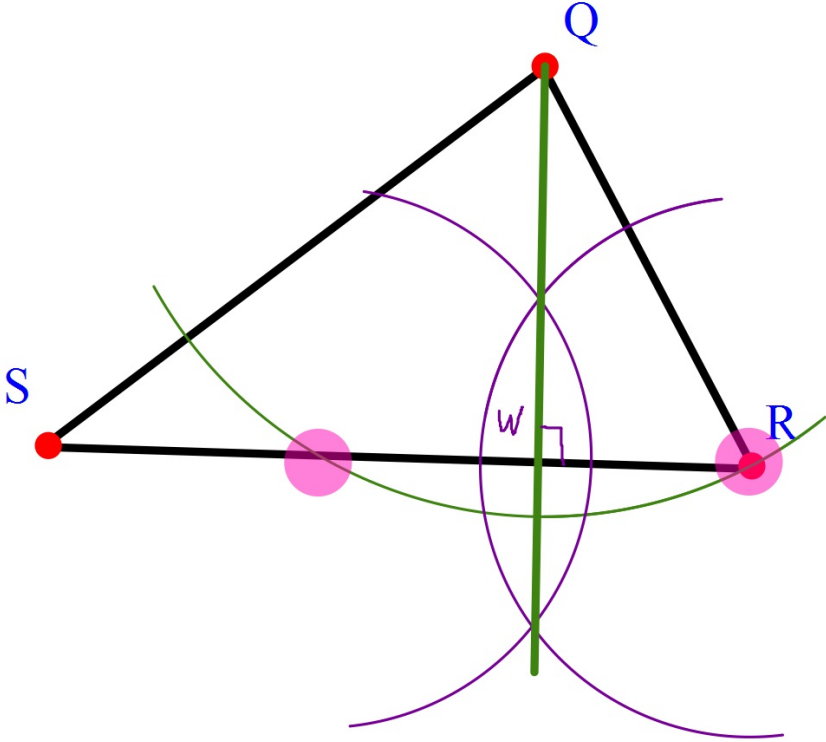




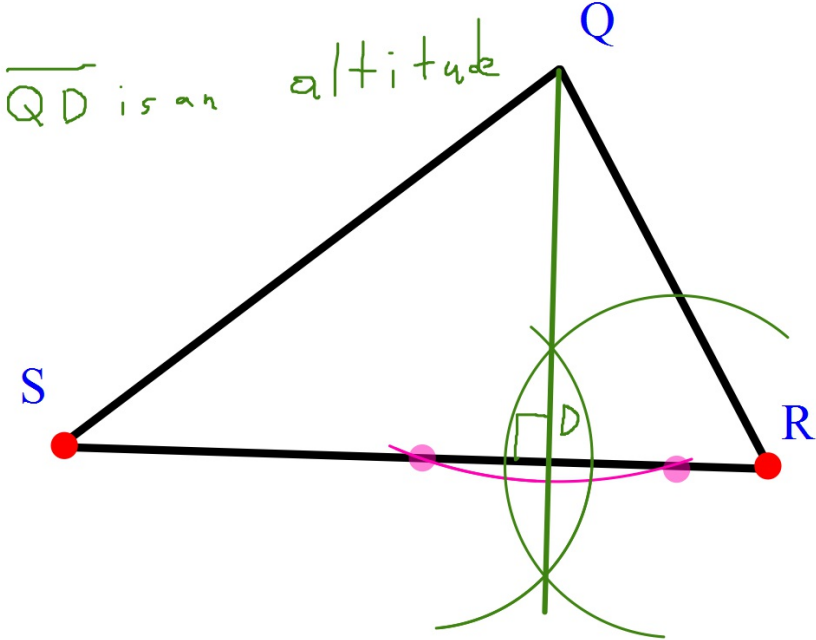


Construct an **altitude**
(perpendicular line segment)
from point Q.

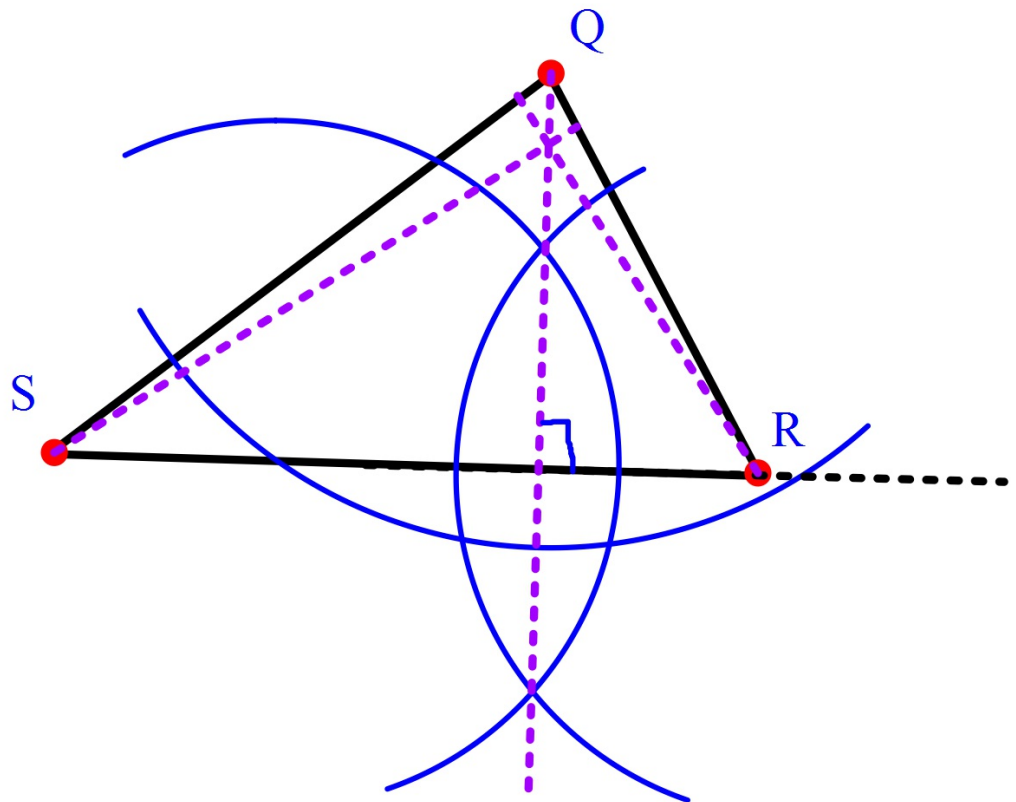
$$\overline{QW} \perp \overline{SR}$$

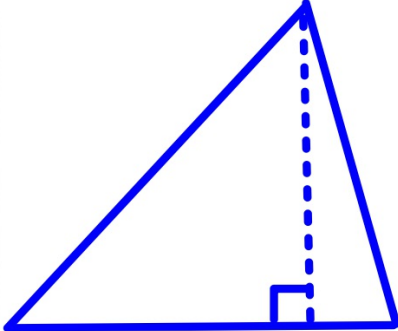


Construct an altitude
(perpendicular line segment)
from point Q.



Construct an altitude
(perpendicular line segment)
from point Q.



Term	Definition	Picture
<p data-bbox="165 831 325 875">Altitude</p> <p data-bbox="333 1285 1018 1352">HW: p. 156 #1-5, 11-16</p> <p data-bbox="504 1431 1007 1485">Quiz Wednesday 3.1-3.3!</p>	<p data-bbox="493 837 1046 1003">a perpendicular line segment connecting a vertex to the opposite side</p>	 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.

