

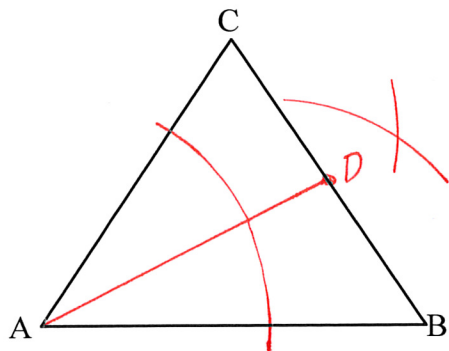
Chapter 3 Review

Constructions to Know

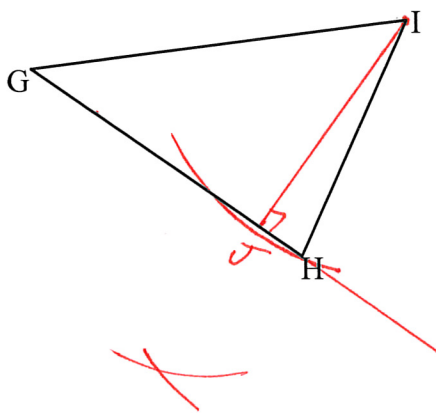
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|---|--|
| 1) Duplicating a segment | 15) Altitude of a Triangle |
| 2) Adding and Subtracting segments | 16) Angle Bisector |
| 3) Duplicating an angle | 17) 90° Angle |
| 4) Adding Angles | 18) 30° Angle (150° Angle) |
| 5) Equilateral Triangle | 19) 45° Angle (135° Angle) |
| 6) 60° Angle | 20) 22.5° Angle |
| 7) Isosceles Triangle | 21) 105° Angle (75° Angle) |
| 8) Duplicate Triangle | 22) 120° Angle |
| 9) Rhombus (and Kite) | 23) Parallel Line through a Given Point (2 ways) |
| 10) Perpendicular Bisector | 24) Square |
| 11) Half of a Segment | 25) Circumcenter |
| 12) Median of a Triangle | 26) Incenter |
| 13) Perpendicular from a Point off a Line | 27) Orthocenter |
| 14) Perpendicular from a Point on a Line | 28) Centroid |

Perform the following constructions.

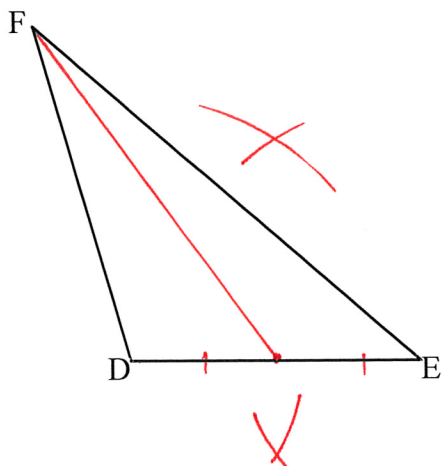
- 1) Construct the angle bisector $\overline{AD}$ in $\triangle ABC$.



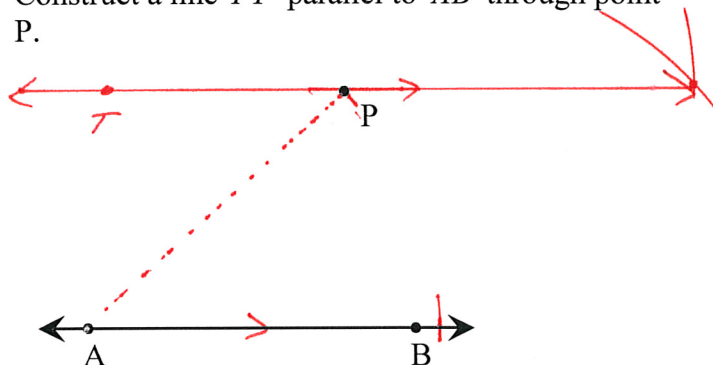
- 2) Construct the altitude $\overline{IJ}$ in $\triangle GHI$.



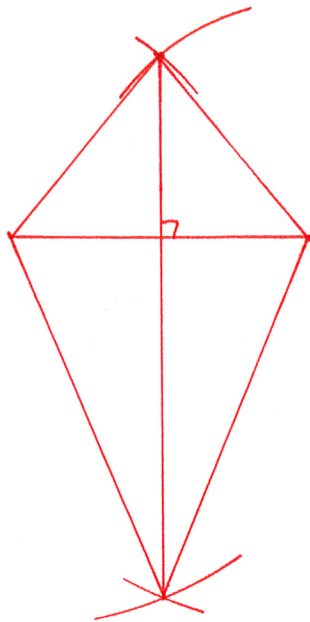
- 3) Construct the median $\overline{MF}$ in $\triangle DEF$ where M is the midpoint of $\overline{DE}$.



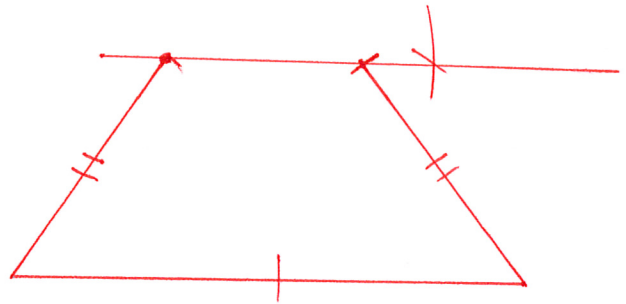
- 4) Construct a line $\overleftrightarrow{PT}$ parallel to $\overleftrightarrow{AB}$ through point P.



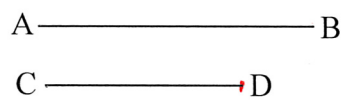
10) Construct a kite.



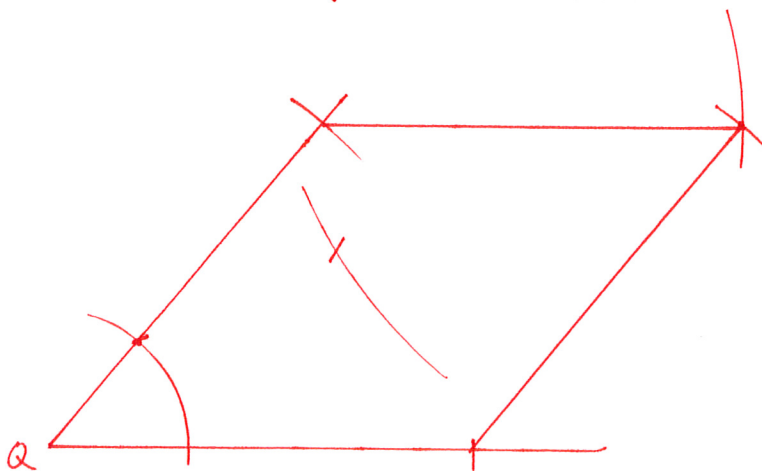
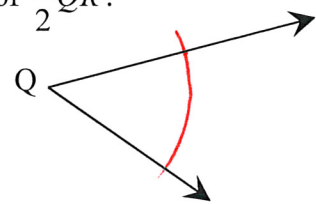
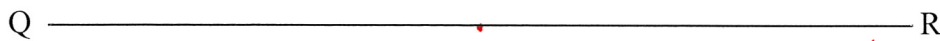
11) Construct an isosceles trapezoid.



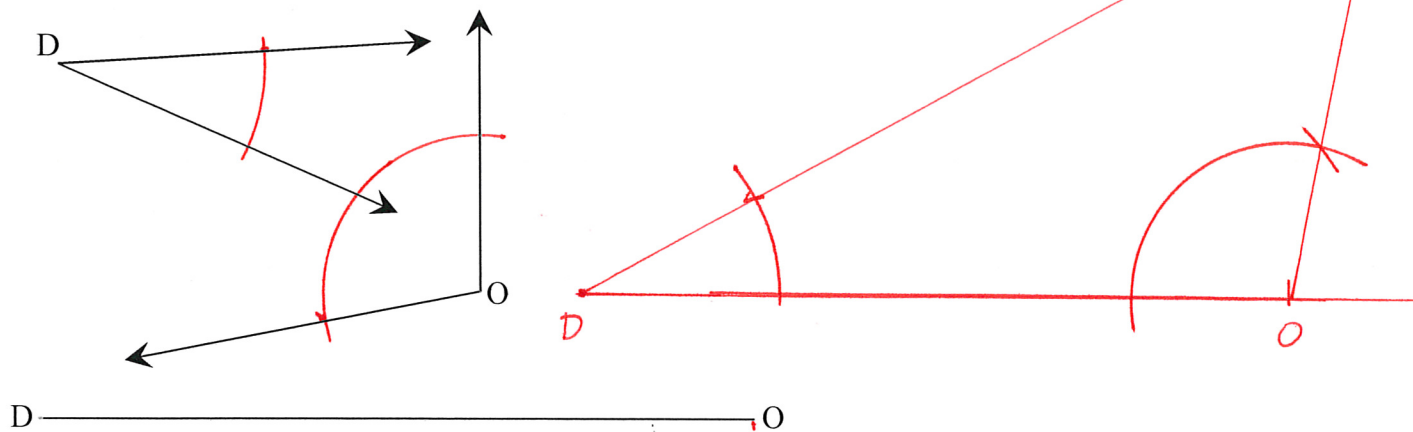
12) Construct segment EF with $EF = \frac{1}{2}(AB + CD)$.



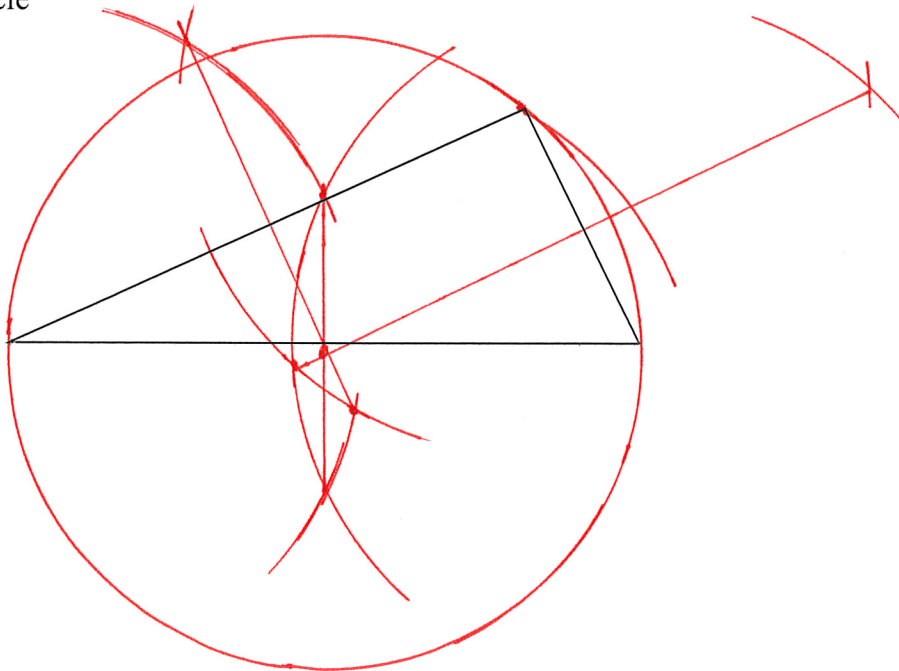
13) Given $\overline{QR}$ and $\angle Q$, construct a rhombus ~~QRST~~ with sides with length of $\frac{1}{2}QR$.



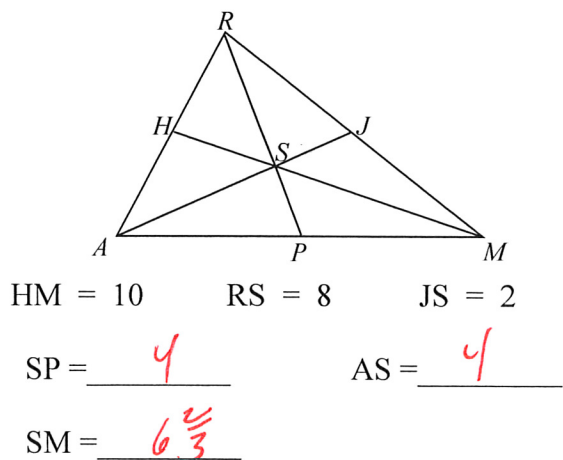
14) Construct $\triangle DOG$



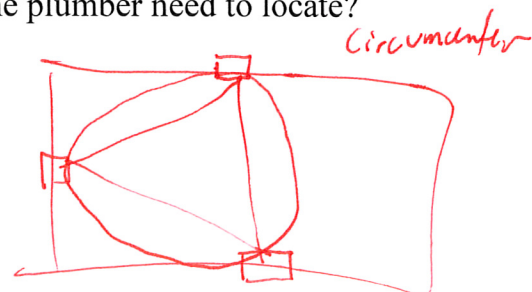
15) Construct the circumscribed circle



16) S is the centroid. Find the missing lengths.

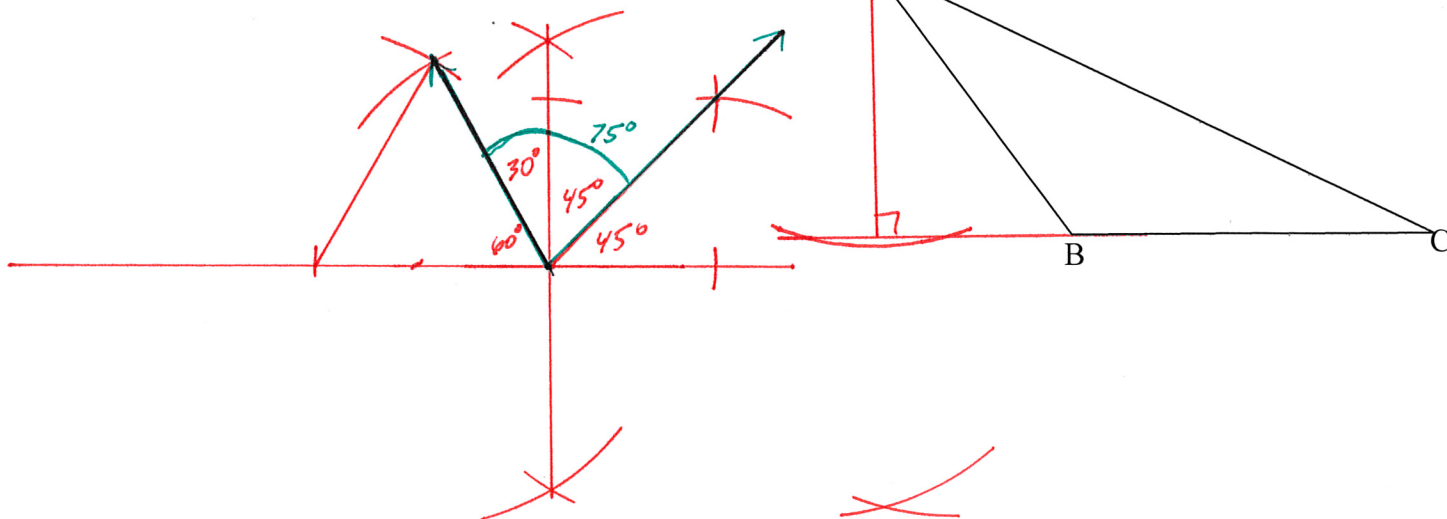


17) Menlo-Atherton High School wants to locate the new drinking fountain equally distant from three doors to the classrooms in the new Technology Wing. What point of concurrency does the plumber need to locate?



5) Construct an angle of 75° .

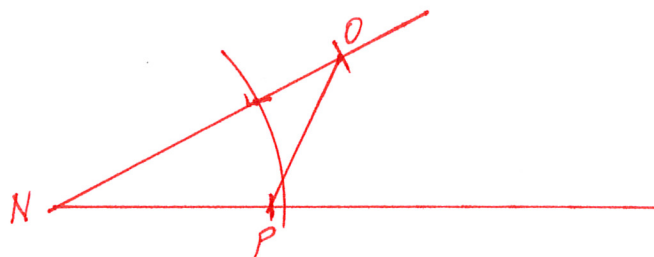
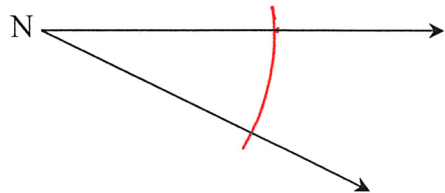
6) Construct the altitude from vertex A.



8) Construct $\triangle NOP$ given the segments and the angle below:

N ————— O

N ————— P



9) Given the following, construct a $\triangle CAT$ with length y as the perimeter and x the length of the base.

