

Chapter 1- Foundations of Geometry

#1-6, Vocabulary: Fill in the blank with the correct Geometry term

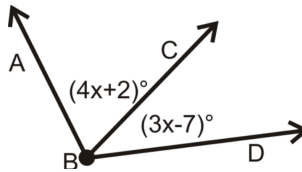
- Two angles which share a ray, but no common interior points are _____.
- _____ angles sum to 90° .
- If \overline{NP} _____ $\angle MNO$, then $m\angle MNP = m\angle PNO$ (a sketch may help).
- Opposite rays and a straight angle are synonyms for a _____.
- The common endpoint of the sides of an angle is the _____.
- Points that line in the same plane are termed _____.

#7-10, Make a sketch with the following information in order to answer the True/False questions.

Vertical angles: $\angle 1$ & $\angle 2$. Linear Pairs: $\angle 1$ & $\angle 3$ and $\angle 1$ & $\angle 4$

- If $m\angle 3 = 30^\circ$, then $m\angle 4 = 150^\circ$
- If $m\angle 1 = 45^\circ$, then $m\angle 4 = 135^\circ$
- It will always be true that $m\angle 3 = m\angle 4$
- It will always be true that $\angle 1 + \angle 2 = \angle 3 + \angle 4$

11. Solve for x if $m\angle ABD = 130^\circ$



12. \overline{JK} bisects \overline{GH} at I. If $GI = 13x - 14$ and $HI = 2x + 42$, find the length of GH (A sketch may help).

#13-16, Use the following coordinates: J(3,-4) K(10, 6) L(0, -3) M(-2, 2)

13. Find the midpoint of \overline{JK} ,

14. Determine the distance from K to L.

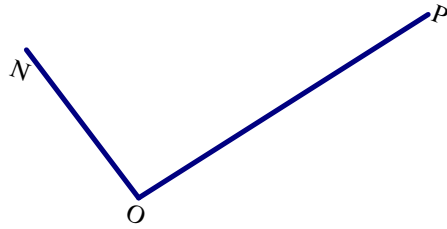
15. M is the midpoint of L and N.
Find the coordinates of Point N.

16. Find the length of \overline{KM}

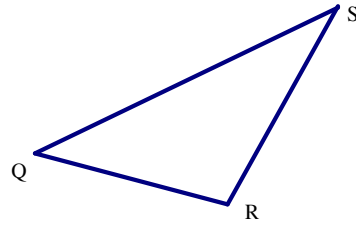
Chapter2- Geometric Reasoning (Constructions and Proofs)

#1-5, Use a compass and a straight edge to construct each of the following.

1. Bisect $\angle NOP$



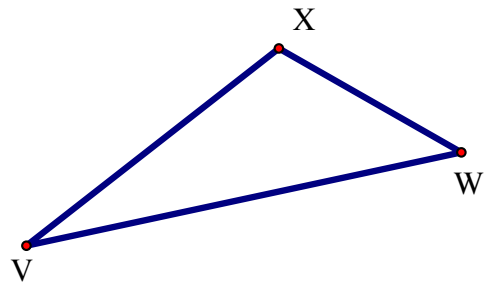
2. Construct a triangle congruent to $\triangle QRS$



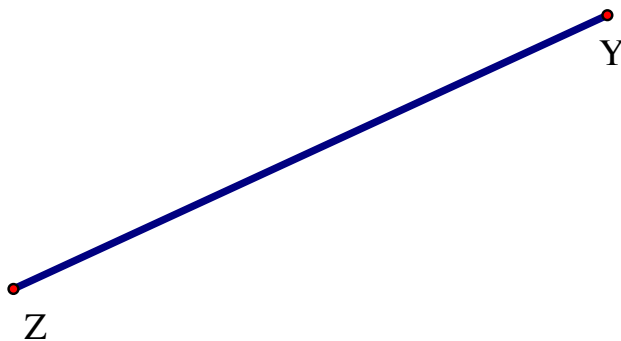
3. Construct a square with side lengths of TU.



4. Construct the altitude of \overline{VW} in $\triangle VWX$.



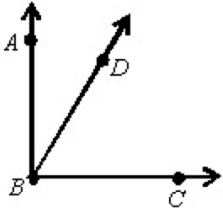
5. Construct a line parallel to \overline{ZY} .



6. Fill in the missing statements and reasons in the proof below.

Given: $\angle ABD$ and $\angle DBC$ are complementary.

Prove: $\angle ABC$ is a right angle.

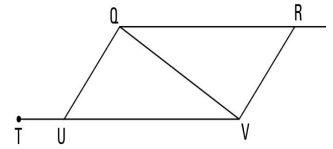


Statements	Reasons
$\angle ABD$ and $\angle DBC$ are complementary.	Given
$m\angle ABD + m\angle DBC = 90^\circ$?
?	Angle Addition Postulate
$90^\circ = m\angle ABC$?
?	Definition of right angle

7. Write a proof:

Given: $\angle UQV \cong \angle RVQ$
 $\angle TUQ \cong \angle SRV$

Prove: $QRVU$ is a parallelogram

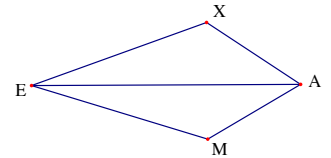


Statements	Reasons

8. Write a proof:

Given: $\angle UQV \cong \angle RVQ$
 $\angle TUQ \cong \angle SRV$
 $QRVU$ is a parallelogram
 $\triangle EXA \cong \triangle EMA$

Prove: $\triangle EXA \cong \triangle EMA$



Statements	Reasons