DIAGRAM #1

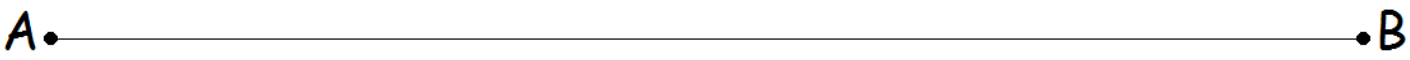


DIAGRAM #2

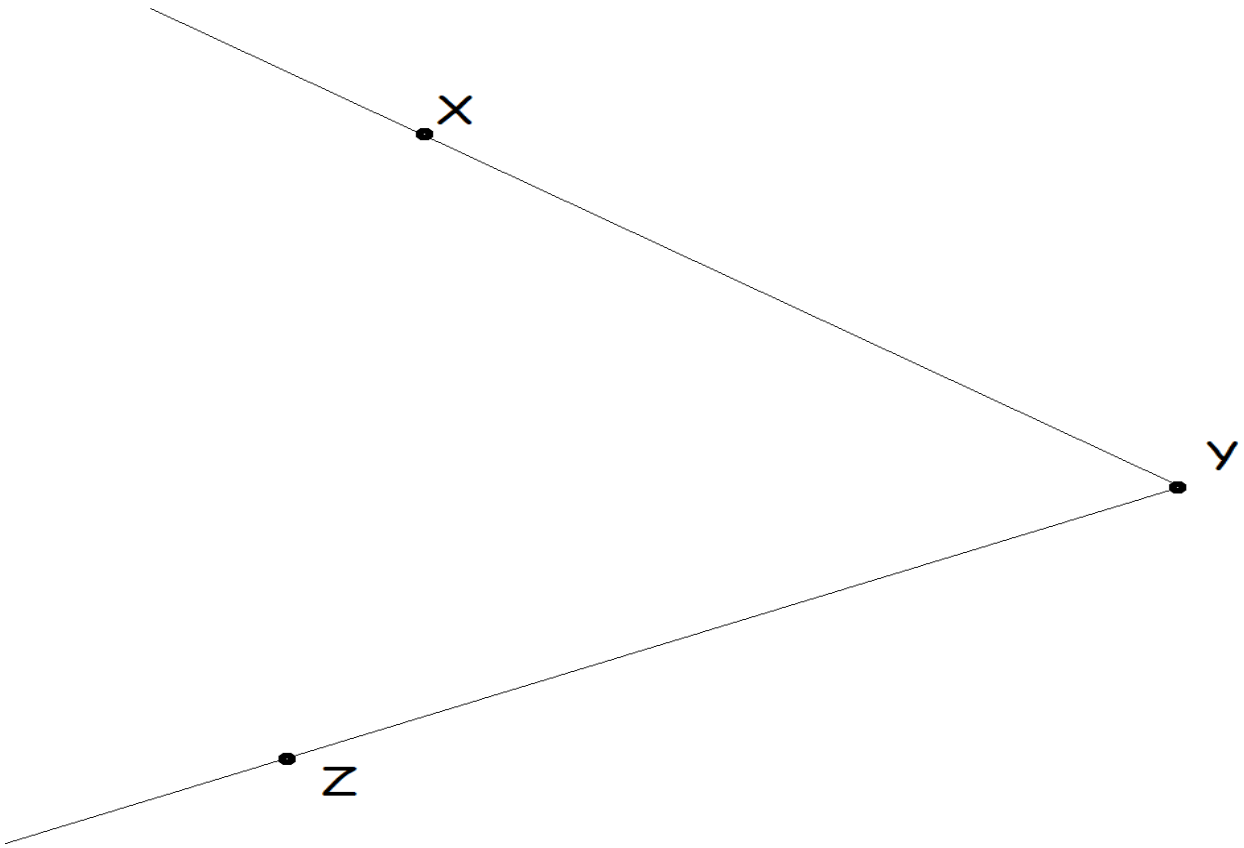


DIAGRAM #3

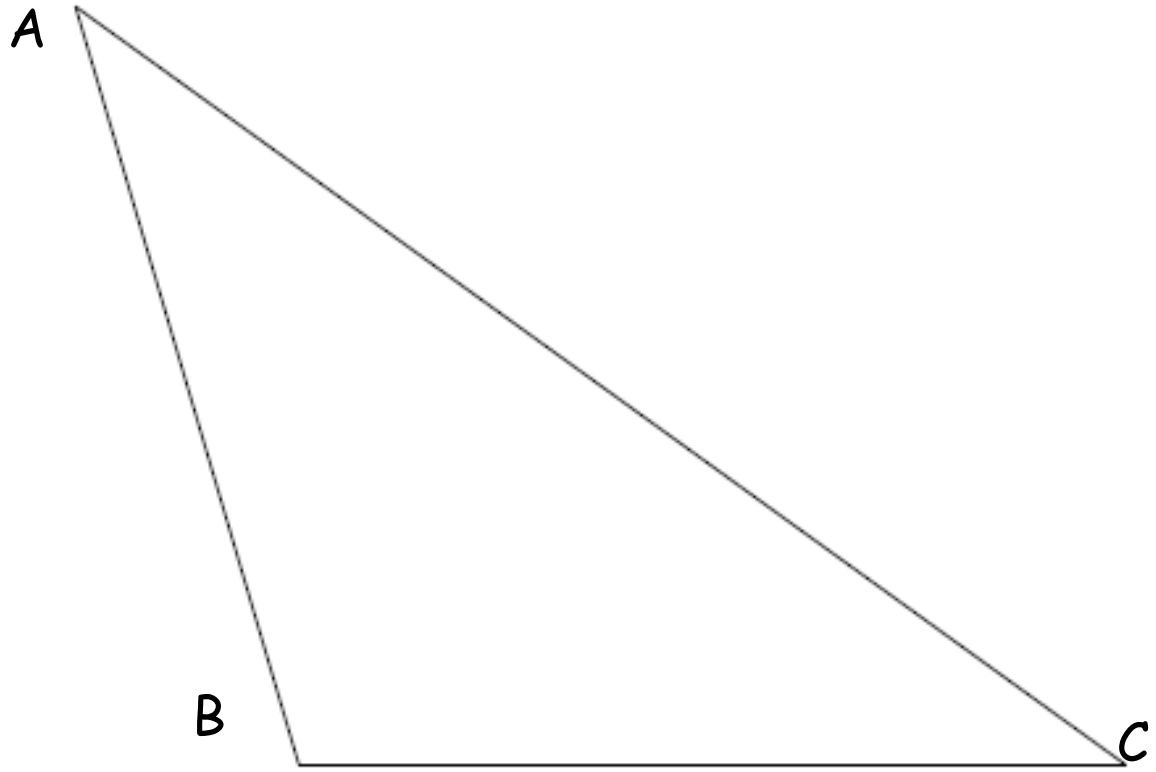


DIAGRAM #4

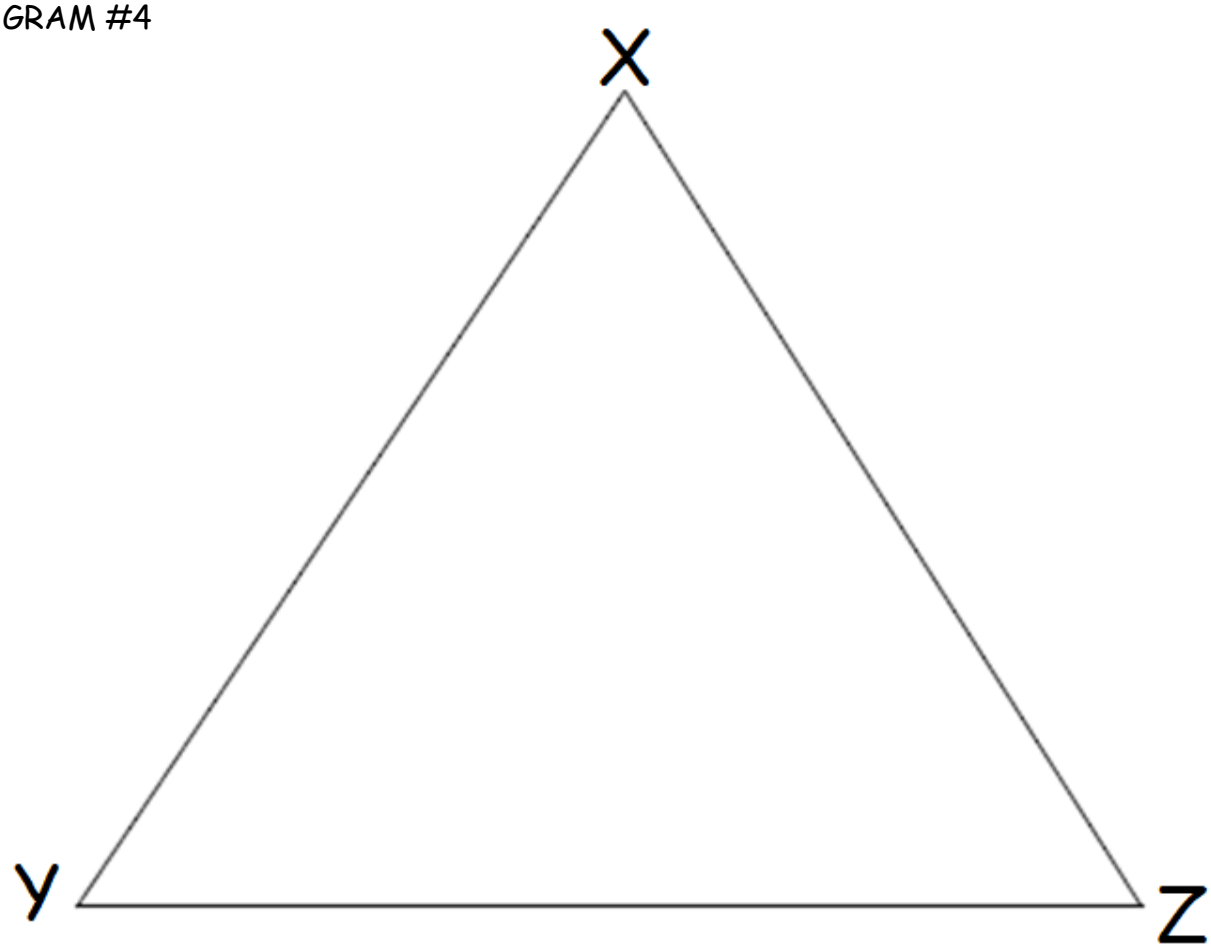


DIAGRAM #5

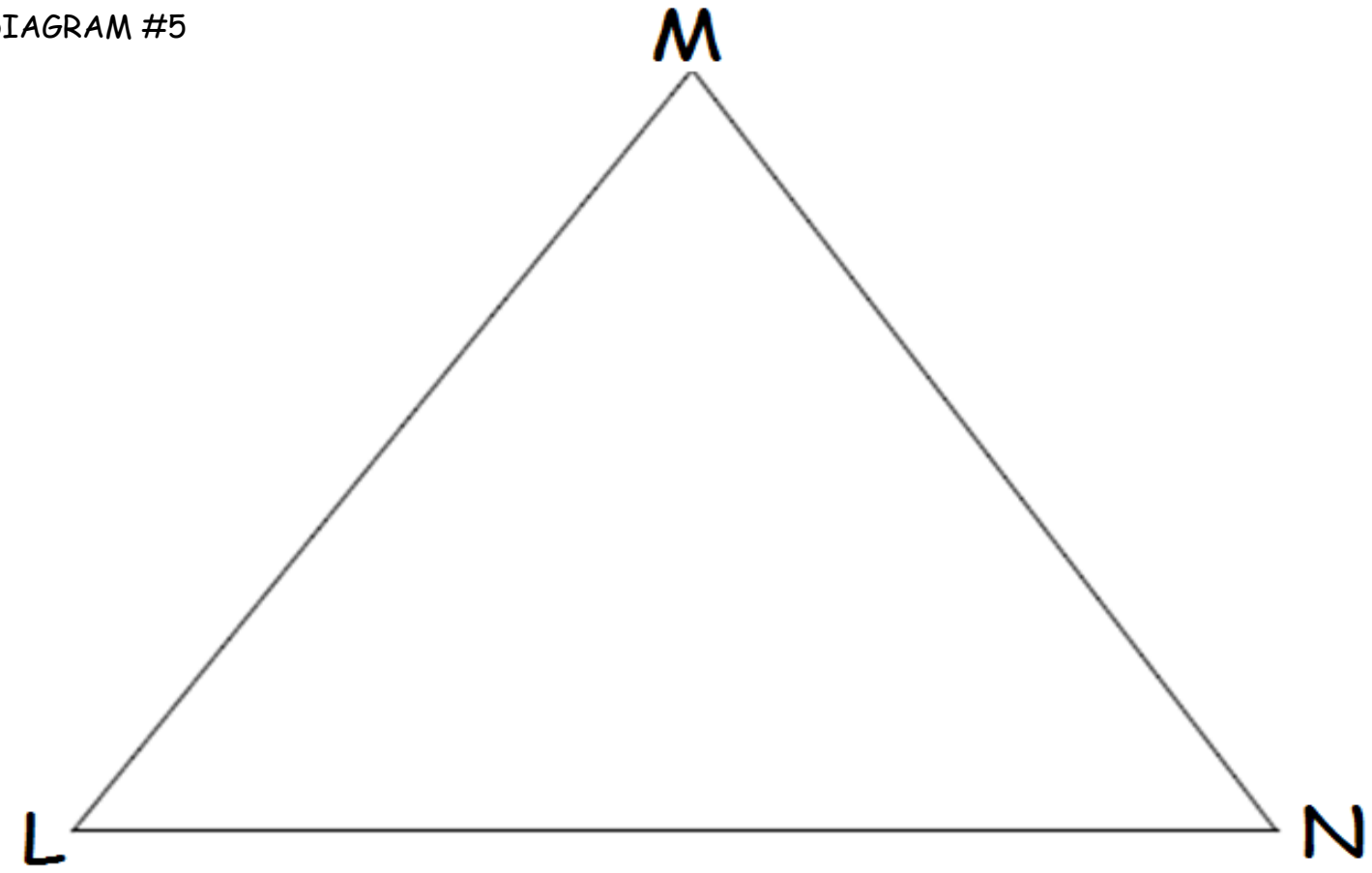
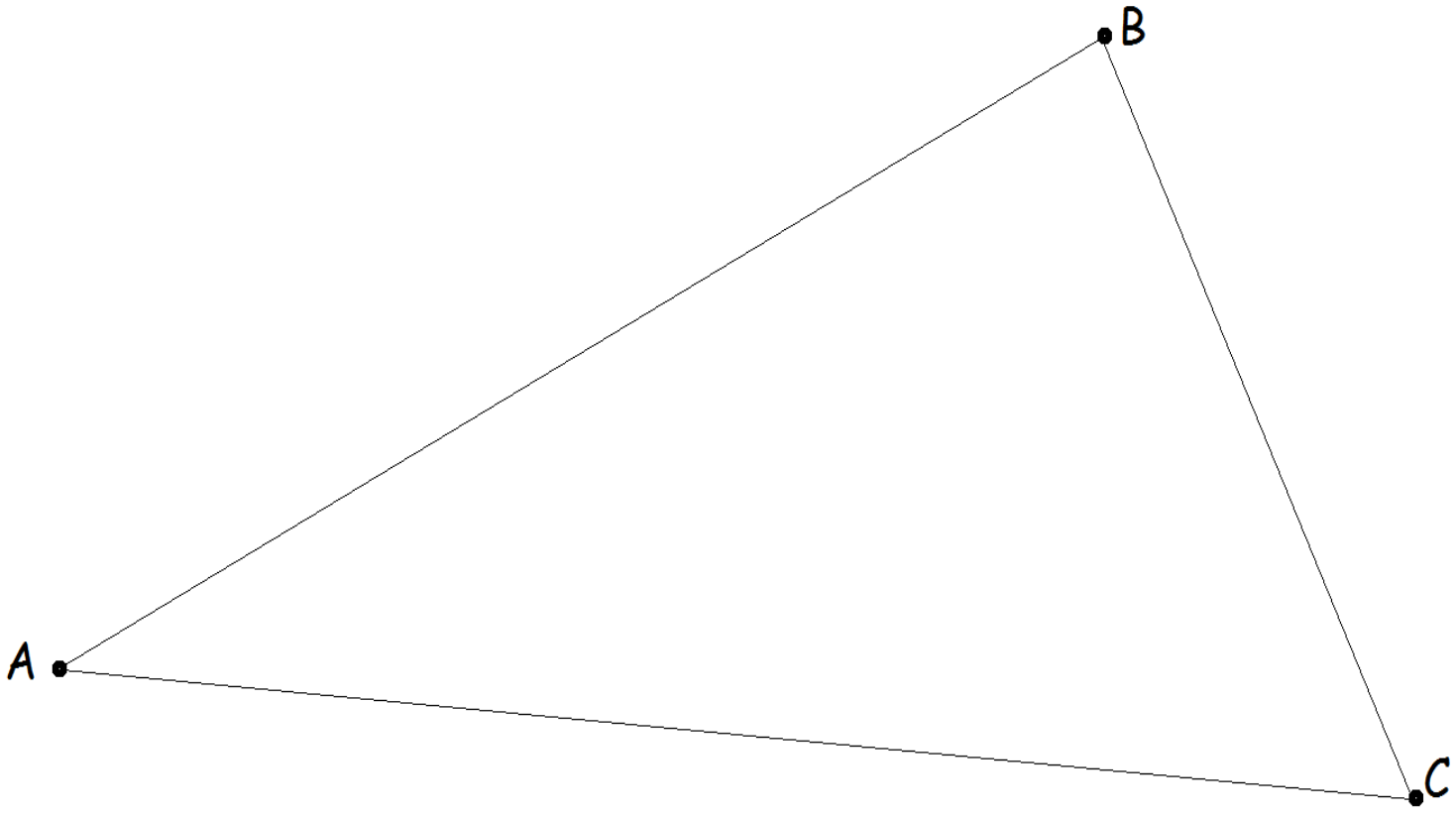


DIAGRAM #6



GEOMETRY NAME _____

Triangle Constructions Question sheet Period _____

Construction #1 **MIDPOINT of a SEGMENT**

a. m$\overline{AB}$ =_____ m$\overline{AM}$ =_____ m$\overline{BM}$ =_____

M is called the midpoint of $\overline{AB}$ because …

_____

_____

Construction #1b **PERPENDICULAR BISECTOR of a SEGMENT**

b. m$\angle AMC$ =_____ m$\angle BMC$ =_____

c. m$\overline{CA}$ =_____ m$\overline{CB}$ =_____

$\overline{MC}$ is called the <u>perpendicular bisector</u> of $\overline{AB}$ because …

_____

_____

Which 2 triangles are congruent? By what Theorem?

d. m$\overline{DA}$ =_____ m$\overline{DB}$ =_____

IF you drew another point, E on $\overline{MC}$, What would be true about $\overline{AE}$ and $\overline{BE}$?

_____

_____

Construction #2 **ANGLE BISECTOR**

e. m$\angle XYZ$ =_____ m$\angle XYR$ =_____ m$\angle RYZ$ =_____

$\overrightarrow{YR}$ is called the <u>angle bisector</u> of $\angle XYZ$ because

_____

_____

f. m$\angle XYQ$ =_____ m$\angle ZYQ$ =_____

m$\overline{QS}$ =_____ m$\overline{QT}$ =_____

Which 2 triangles are congruent? By what Theorem?

Construction #3 **ANGLE BISECTORS in a TRIANGLE**

g. $m\angle A =$_____ $m\angle BAX =$_____ $m\angle CAX =$_____

$m\angle B =$_____ $m\angle ABX =$_____ $m\angle CBX =$_____

$m\angle C =$_____ $m\angle ACX =$_____ $m\angle BCX =$_____

What do we call the point where all the angle bisectors meet? _____

Construction #4 **PEPENDICULAR BISECTORS in a TRIANGLE**

h. The point where all the perpendicular bisector meet is called the _____

$m\angle YRC =$_____ $m\angle ZSC =$_____ $m\angle XTC =$_____

$m\overline{CX}$ =_____ $m\overline{CY}$ =_____ $m\overline{CZ}$ =_____

Construction #5 **MEDIANS of a TRIANGLE**

i. A segment connecting the midpoint of a side to the opposite vertex is called a _____.

The medians of a triangle intersect at a point called the _____.

$m\overline{CL} =$_____ $m\overline{CM} =$_____ $m\overline{CN} =$_____

$m\overline{CU}$ =_____ $m\overline{CV} =$_____ $m\overline{CT}$ =_____

Construction #6 **MIDSEGMENTS of a TRIANGLE**

j. A segment that joins the midpoints of two sides of a triangle is called a _____.

$m\overline{AB} =$_____ $m\overline{BC} =$_____ $m\overline{AC} =$_____

$m\overline{ZY}$ =_____ $m\overline{XZ} =$_____ $m\overline{XY}$ =_____

In your own words, what is the pattern or connection between the midsegments and the sides of a triangle?

_____

_____

k. $m\angle AXZ =$_____ This the same measure as _____?

By corresponding angles, which two lines are parallel? _____

$m\angle BXY =$_____ This the same measure as _____?

By corresponding angles, which two lines are parallel?

$m\angle CYZ =$_____ This the same measure as _____?

By corresponding angles, which two lines are parallel?