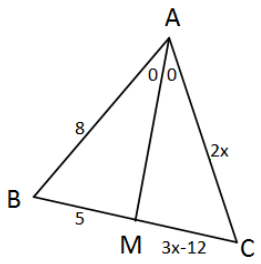
Name: _____

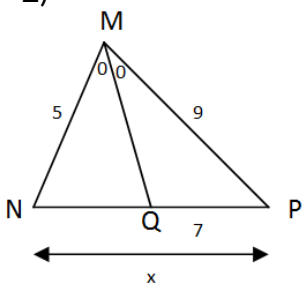
Proportions and Similar Triangles

Exercise 1: Find the value of x

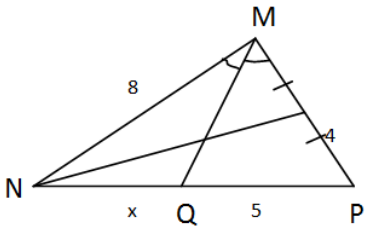
1)



2)

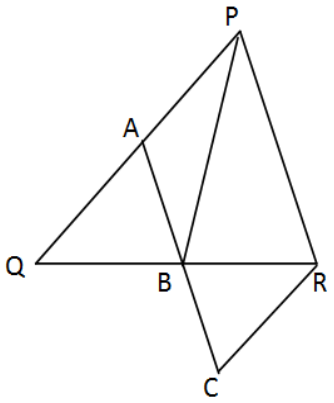


3)



Exercise 2: Let *I* be the point of intersection of the bisectors of triangle *ABC*. Prove that if $\overline{AI}$ is produced to meet $\overline{BC}$ at *X*, then $\frac{IX}{IA} = \frac{BC}{AB + AC}$

Exercise 3: Given: *PB* bisects $\angle P$ and *A* is the midpoint of $\overline{PQ}$. *RC* // *PQ* and meets *AB* produced, at *C*. Write down the value of the ratio $\frac{QB}{BR}$ in two different ways and Show that $RC = \frac{1}{2}PR$



Exercise 4: In the adjacent figure, AB = 15, MB = 6, AC = 25, and AN = 15. Is *MN* // *BC*? Justify your answer.