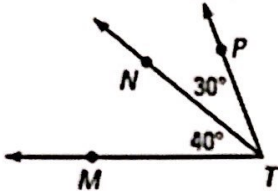


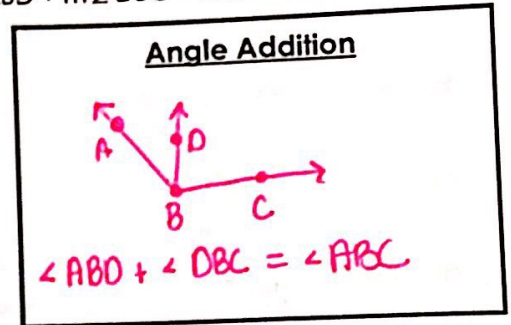
Day 4 – Angle Relationships Notes

**Angle Addition Postulate:** If point D lies in the interior of  $\angle ABC$ , then  $m\angle ABD + m\angle DBC = m\angle ABC$ .

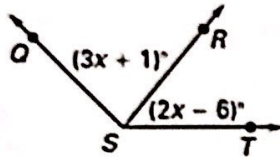
a. Find the measure of  $\angle PTM$ :



$\angle PTM = 70^\circ$



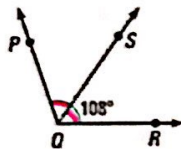
b. Given  $m\angle QST = 135^\circ$ , find  $m\angle QSR$ .



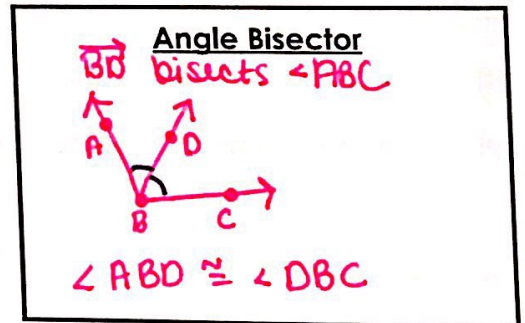
$3x + 1 + 2x - 6 = 135$        $\angle QSR = 3(28) + 1$   
 $5x - 5 = 135$                        $= 85^\circ$   
 $5x = 140$   
 $x = 28$

**Angle Bisector:** A ray that divides an angle into two congruent angles (two angles with equal measure).

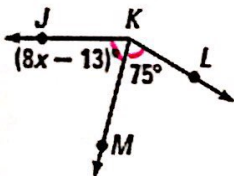
a.  $\overline{QS}$  bisects  $\angle PQR$ . Find  $m\angle PQS$ .



$\frac{108}{2} = 54^\circ$



b.  $\overline{KM}$  bisects  $\angle JKL$ . Find the value of x.

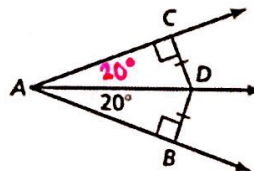


$8x - 13 = 75$

$8x = 88$

$x = 11$

c. Find the measure of  $\angle CAB$  if  $\overline{AD}$  bisects  $\angle CAB$ .



$\angle CAB = 40^\circ$