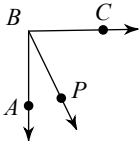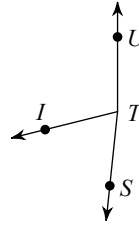Segment and Angle Addition Postulate

Name_____
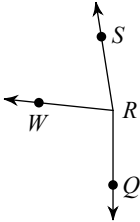
1) $m\angle PBA = 26°$, $m\angle CBA = 19x - 4$,
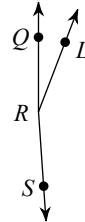   and $m\angle CBP = 14x - 5$. Find x.

2) $m\angle STI = 70°$, $m\angle ITU = -4 + 9x$,
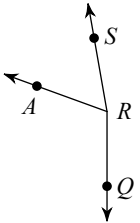   and $m\angle STU = 14x + 6$. Find x.

3) Find x if $m\angle WRS = x + 77$,
   $m\angle QRW = x + 98$, and $m\angle QRS = 171°$.

4) $m\angle QRS = 176°$, $m\angle QRL = x + 11$,
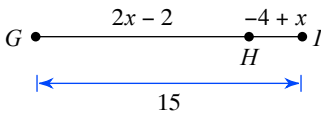   and $m\angle LRS = 14x + 15$. Find x.

5) $m\angle QRA = 11x + 11$, $m\angle ARS = 60°$,
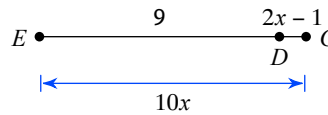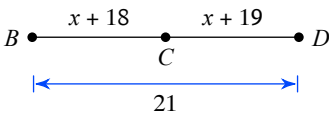   and $m\angle QRS = 8 + 18x$. Find x.
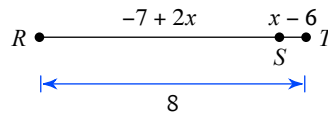

Find the length indicated.

6) Find GH

2x – 2   –4 + x
G ————————H———• I
          15

7) Find EC

          9   2x – 1
E ————————D———• C
          10x

8) Find BC

x + 18   x + 19
B ————C————————• D
          21

9) Find ST

–7 + 2x   x – 6
R ————————S———• T
          8

10) Find MN

3   3x – 6
L ——M——————————• N
      x + 9

Answers to

1) 5

2) 12

3) −2

4) 10

5) 9

6) 12

7) 10

8) 10

9) 1

10) 12