4.1 – Triangle Sums

Determine the missing variables.
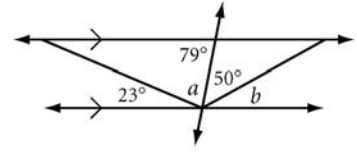
1) $p =$ _____, $q =$ _____

82° p q
31° 98°

2) $x =$ _____, $y =$ _____

28° 53° x
y
17°

3) $a =$ _____, $b =$ _____

79°
50°
23° a b

4) $t =$ _____

t
s
r 100°

5) $x =$ _____, $y =$ _____

85° x
y
31°

6) $x =$ _____, $y =$ _____

$100 - x$
$30 + 4x$ $7x$ y

7) $s =$ _____

s
76°

8) $m =$ _____

35°
m

9) $m\angle P =$ _____

c b
c a
P
a

10)

28° 17°
85° $x°$ $y°$ $z°$

11)

$z°$
85°
$y°$
63°
$x°$ 130°

12)

13°
$x°$ $y°$ 50°
$z°$
84°
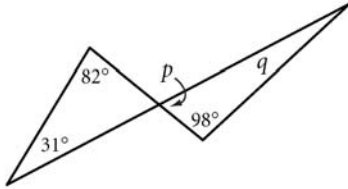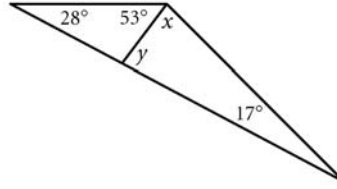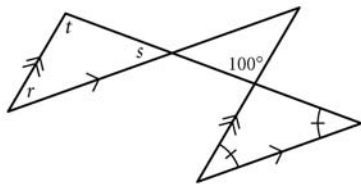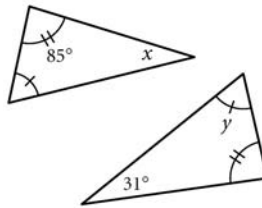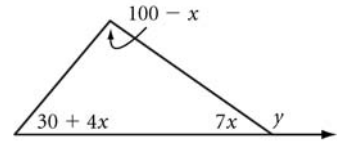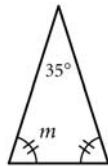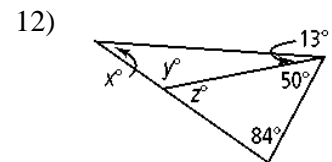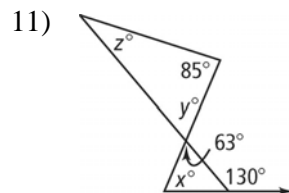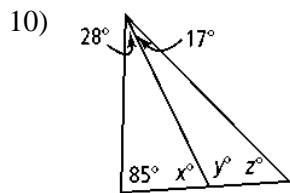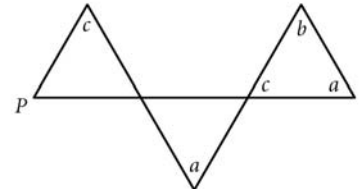
13) Use the diagram at the right to answer the questions.

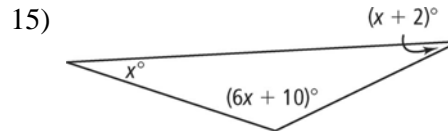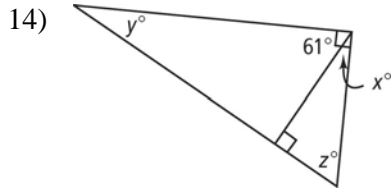   a. Which angle is an exterior angle?

    b. What are its remote interior angles?

    c. Find $m\angle 1$ and $m\angle 2$.
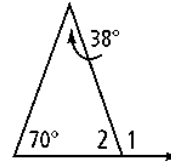
Find the values of the variables and the measures of the angles.

14)

15)

Find the value of x. SHOW ALL ALGEBRAIC WORK.

16) In the diagram, $m \parallel n$, $\overline{AB} \perp m$, $m\angle ADC = m\angle BCE = 3x$, $\angle CEB = 50°$, and $\angle BCD = x$.