Name_____

Angle Bisectors of Triangles

Date_____ Period____

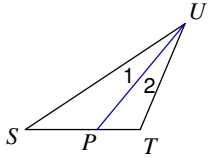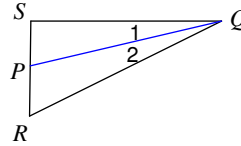**Each figure shows a triangle with one of its angle bisectors.**
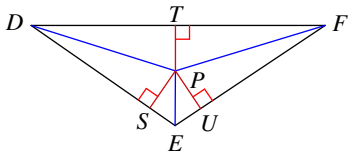
1) $m\angle SUT = 34°$. Find $m\angle 1$.

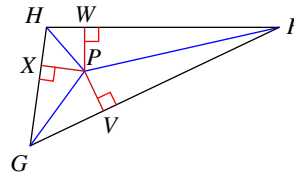2) Find $m\angle SQR$ if $m\angle 2 = 13°$.

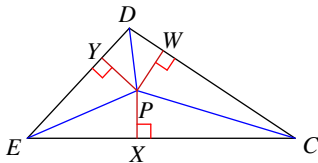**Each figure shows a triangle with its three angle bisectors intersecting at point P.**
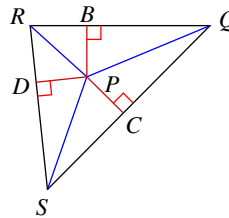
3) $PT = 3$. Find PU.
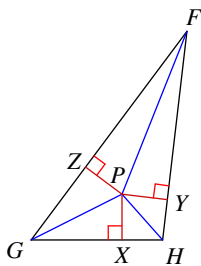
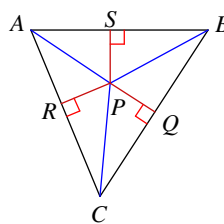4) Find PV if $PW = 7$.

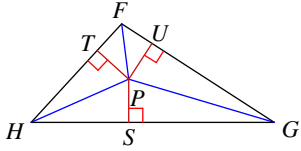5) Find PW if $PX = 5$.

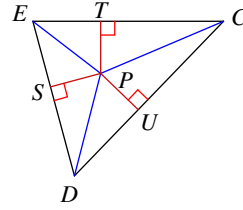6) Find PD if $PC = 8$.

7) $PY = 2$ and $HP = 3$.
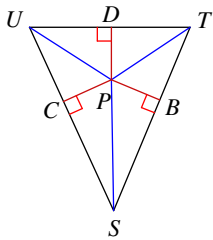   Find HY.

8) Find AP if $PQ = 1$
   and $AR = 2$.
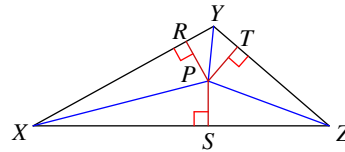
9) $PT = 5$ and $FP = 7$.
Find FT.

10) $PT = 3$ and $CP = 8$.
Find CT.

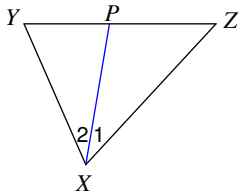11) Find PB if $UC = 2$
and $UP = 3$.
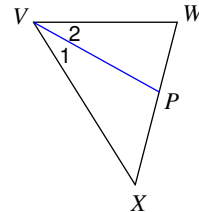
12) $PS = 3$ and $XP = 5$.
Find XS.

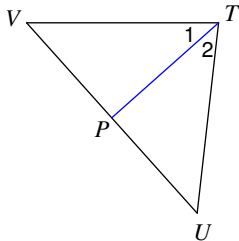**Each figure shows a triangle with one of its angle bisectors.**

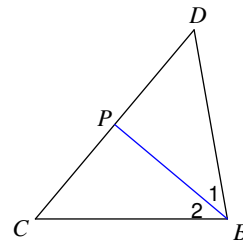13) Find x if $m\angle 2 = 4x + 5$ and
$m\angle 1 = 5x - 2$.

14) Find x if $m\angle 2 = 1 + 28x$ and
$m\angle XVW = 59x - 1$.

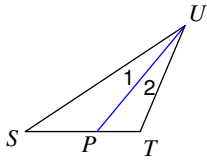15) $m\angle 1 = 7x + 7$ and $m\angle VTU = 16x + 4$.
Find $m\angle 1$.

16) Find $m\angle 2$ if $m\angle 2 = 7x + 5$ and
$m\angle 1 = 9x - 5$.
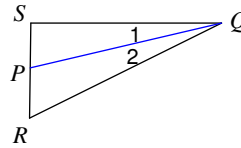
Name_____

Angle Bisectors of Triangles

Date_____ Period____

Each figure shows a triangle with one of its angle bisectors.

1) $m\angle SUT = 34°$. Find $m\angle 1$.

U

1 2

S *P* *T*

17°

2) Find $m\angle SQR$ if $m\angle 2 = 13°$.

S *Q*

1
2

P

R

26°

Each figure shows a triangle with its three angle bisectors intersecting at point P.

3) $PT = 3$. Find PU.

D *T* *F*

P

S *U*

E

3

4) Find PV if $PW = 7$.

H *W* *F*

X *P*

V

G

7

5) Find PW if $PX = 5$.

D

Y *W*

P

E *X* *C*

5

6) Find PD if $PC = 8$.

R *B* *Q*

D *P*

C

S

8

7) $PY = 2$ and $HP = 3$.
   Find HY.

F

Z *P*

Y

G *X* *H*

2.24

8) Find AP if $PQ = 1$
   and $AR = 2$.

A *S* *B*

R *P*

Q

C

2.24

9) $PT = 5$ and $FP = 7$.
   Find FT.

   4.9

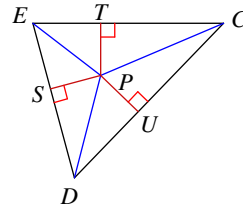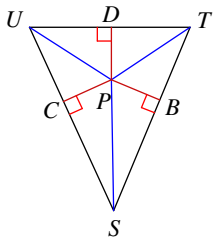10) $PT = 3$ and $CP = 8$.
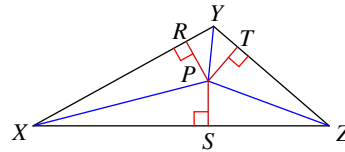   Find CT.

    7.42

11) Find PB if $UC = 2$
    and $UP = 3$.
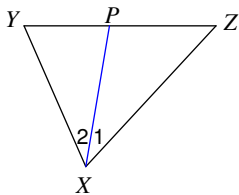

    2.24

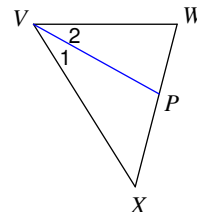12) $PS = 3$ and $XP = 5$.
    Find XS.

    4

Each figure shows a triangle with one of its angle bisectors.

13) Find x if $m\angle 2 = 4x + 5$ and
    $m\angle 1 = 5x - 2$.

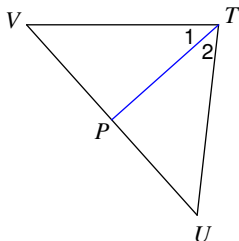
    7

14) Find x if $m\angle 2 = 1 + 28x$ and
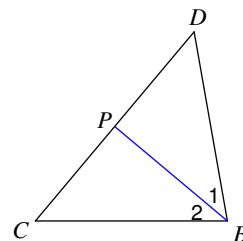 $m\angle XVW = 59x - 1$.

    1

15) $m\angle 1 = 7x + 7$ and $m\angle VTU = 16x + 4$.
    Find $m\angle 1$.

    42°

16) Find $m\angle 2$ if $m\angle 2 = 7x + 5$ and
    $m\angle 1 = 9x - 5$.

    40°

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