0520 Geometry Name_____

Practice Quiz: Angle bisectors, medians, and triangle inequality Date_____

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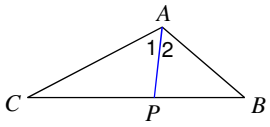
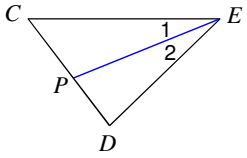
Each figure shows a triangle with one of its angle bisectors.

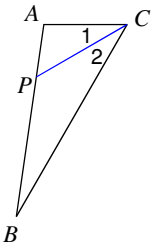
1) Find $m\angle 2$ if $m\angle CAB = 112°$.



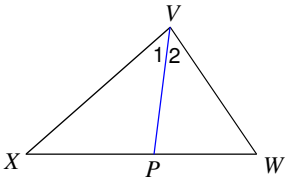
2) $m\angle 1 = 22°$. Find $m\angle CED$.



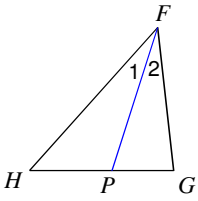
3) Find $m\angle ACB$ if $m\angle 1 = 30°$.



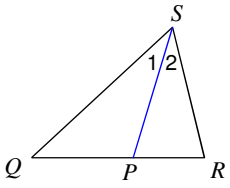
4) Find $m\angle 1$ if $m\angle 2 = 41°$.



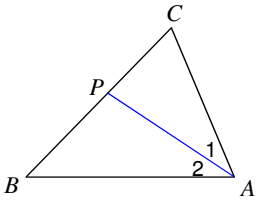
5) $m\angle 2 = 6x$ and $m\angle 1 = 5x + 4$. Find x.



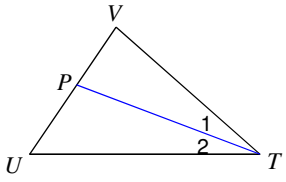
6) Find x if $m\angle 1 = 4x - 6$ and $m\angle 2 = 12 + 2x$.



7) Find x if $m\angle 1 = 9x - 3$ and $m\angle CAB = 17x - 2$.



8) Find x if $m\angle 2 = 4x + 4$ and $m\angle VTU = 10x$.



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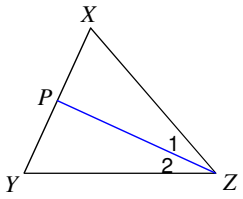
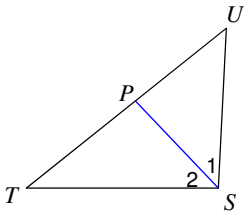
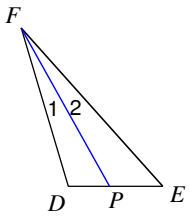
9) Find $m\angle XZY$ if $m\angle 2 = 5x - 1$ and $m\angle 1 = 4x + 4$.



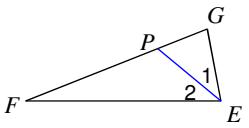
10) $m\angle 2 = 46x$ and $m\angle 1 = 47x - 1$. Find $m\angle UST$.



11) Find $m\angle 1$ if $m\angle 1 = 3 + 3x$ and $m\angle 2 = 5x - 3$.

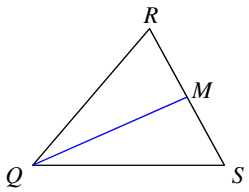


12) $m\angle 2 = 1 + 19x$ and $m\angle GEF = 39x$. Find $m\angle GEF$.

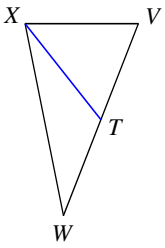


Each figure shows a triangle with one or more of its medians.

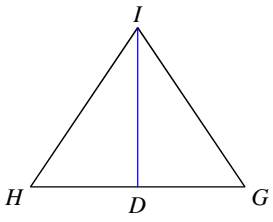
13) Find MS if $MR = 1.7$



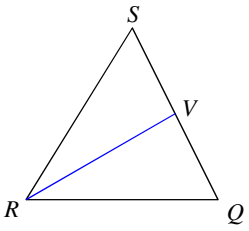
14) Find TW if $TV = 1.5$



15) Find HG if $DG = 5$



16) Find QS if $VS = 10$



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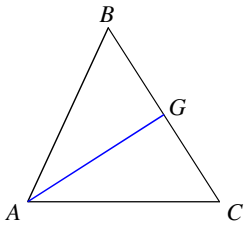
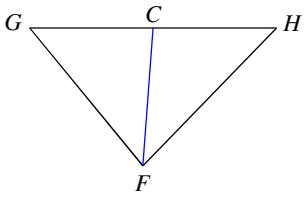
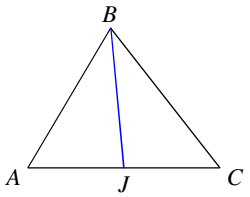
17) Find x if $CB = 3x$ and $GB = 2x - 1$



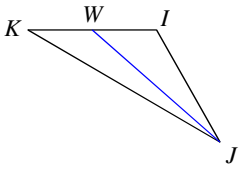
18) Find x if $CG = x + 2$ and $CH = 2x - 3$



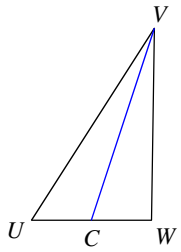
19) Find x if $JC = x - 2$ and $JA = 2x - 8$



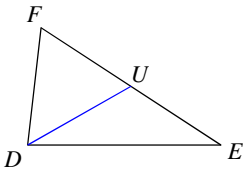
20) Find x if $WK = -3 + 4x$ and $WI = 2x + 3$



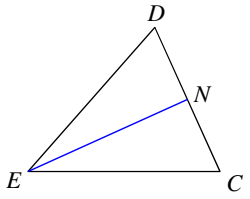
21) Find CU if $UW = x + 4$ and $CW = 2x - 10$



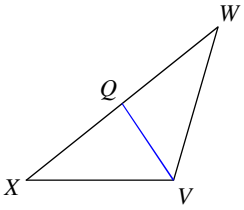
22) Find UE if $UF = 2x - 5$ and $UE = x - 2$



23) Find NC if $ND = x - 5$ and $NC = 2x - 12$



24) Find WX if $QX = x + 1$ and $QW = -1 + 2x$



State if the three numbers can be the measures of the sides of a triangle.

25) 11, 11, 13

26) 11, 3, 10

27) 6, 7, 10

28) 7, 3, 6

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Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

29) 10, 9

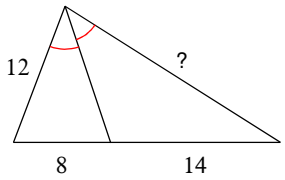
30) 6, 11

31) 9, 7

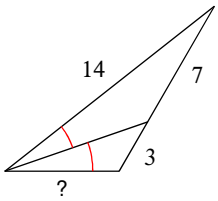
32) 6, 12

Find the missing length indicated.

33)



34)



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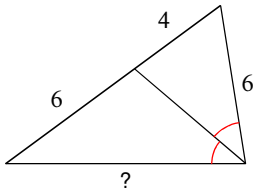
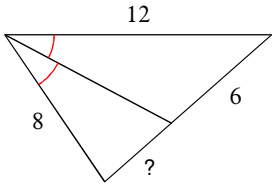
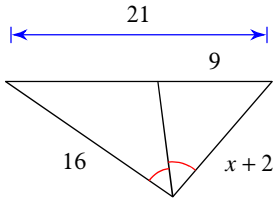


36)

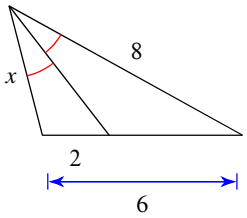


Solve for *x*.

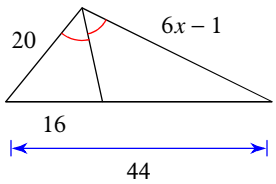
37)



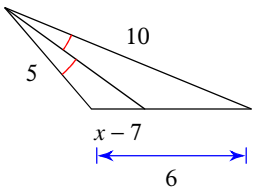
38)



39)



40)



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Answers to Practice Quiz: Angle bisectors, medians, and triangle inequality

1) 56°
2) 44°
3) 60°
4) 41°
5) 4
6) 9
7) 4
8) 4
9) 48°
10) 92°
11) 12°
12) 78°
13) 1.7
14) 1.5
15) 10
16) 20
17) 2
18) 5
19) 6
20) 3
21) 6
22) 1
23) 2
24) 6
25) Yes
26) Yes
27) Yes
28) Yes
29) $1 < x < 19$
30) $5 < x < 17$
31) $2 < x < 16$
32) $6 < x < 18$
33) 21
34) 6
35) 9
36) 4
37) 10
38) 4
39) 6
40) 9

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