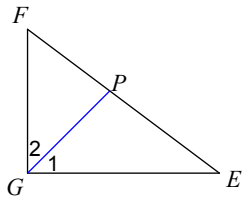
Geometry Name_____ ID: 1

Assignment

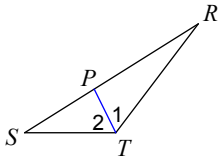
Date_____ Period____

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

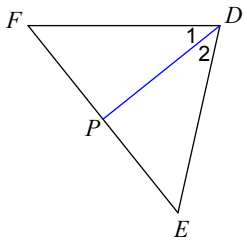
1) $m\angle 2 = 44x + 1$ and $m\angle EGF = 91x - 1$.
Find x.



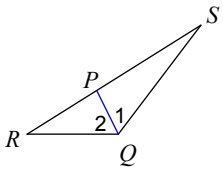
2) $m\angle 1 = 16x - 1$ and $m\angle RTS = 30x + 6$.
Find x.



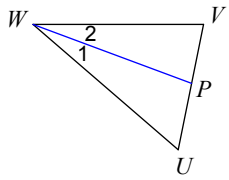
3) $m\angle 2 = 19x$ and $m\angle FDE = -2 + 39x$.
Find x.



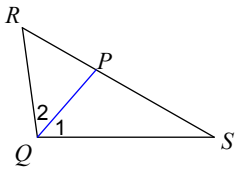
4) Find x if $m\angle 2 = 5x + 13$ and
$m\angle 1 = -7 + 7x$.



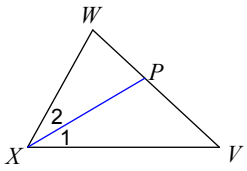
5) Find x if $m\angle 2 = 7x - 1$ and
$m\angle UWV = 12x + 4$.



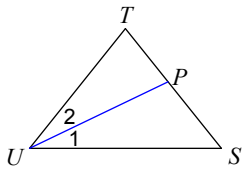
6) $m\angle 2 = 6x + 1$ and $m\angle SQR = 11x + 10$.
Find x.



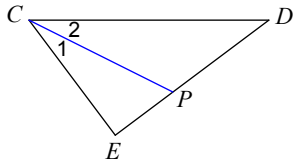
7) $m\angle 2 = 4x - 6$ and $m\angle 1 = 2x + 12$.
Find x.



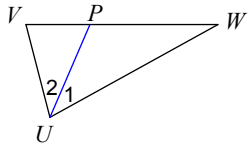
8) Find x if $m\angle 2 = 2x + 9$ and
$m\angle SUT = 7x - 6$.



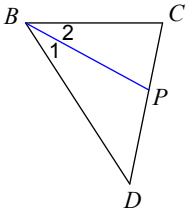
9) Find x if $m\angle 2 = 4x - 6$ and $m\angle 1 = 3x + 2$.



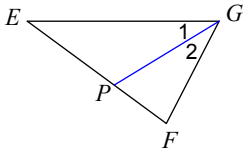
10) $m\angle 2 = 9x + 2$ and $m\angle WUV = 20x - 4$. Find x.



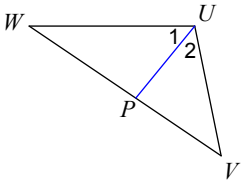
11) $m\angle 1 = 9x + 1$ and $m\angle DBC = 19x - 1$. Find x.



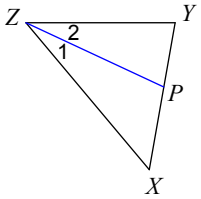
12) Find x if $m\angle 2 = 4x - 1$ and $m\angle EGF = 7x + 6$.



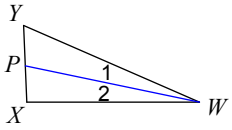
13) $m\angle 2 = 7x + 2$ and $m\angle WUV = 15x - 3$. Find x.



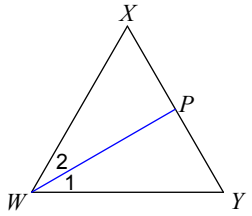
14) $m\angle 2 = 7x + 4$ and $m\angle XZY = -1 + 17x$. Find x.



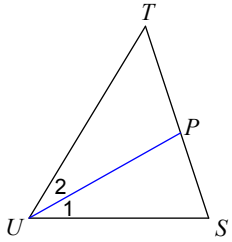
15) $m\angle 2 = 3x - 3$ and $m\angle YWX = 4 + 4x$. Find x.



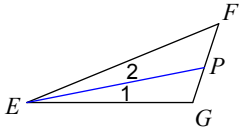
16) Find x if $m\angle 1 = 3x$ and $m\angle YWX = 7x - 10$.



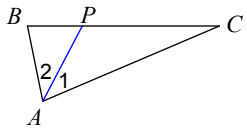
17) $m\angle 1 = 3x + 8$ and $m\angle SUT = 7x + 9$. Find x.



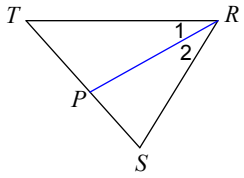
18) $m\angle 2 = 6x - 1$ and $m\angle 1 = 5x + 1$. Find x.



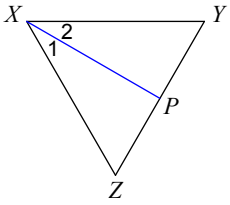
19) $m\angle 1 = 5x + 9$ and $m\angle CAB = 14x - 6$. Find x.



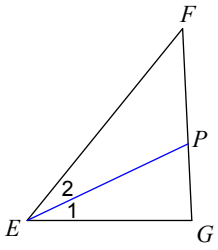
20) Find x if $m\angle 2 = 2x + 11$ and $m\angle TRS = 7x - 5$.



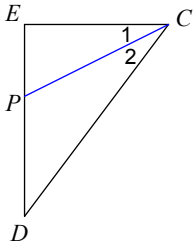
21) Find x if $m\angle 2 = 31x - 1$ and $m\angle 1 = 29x + 1$.



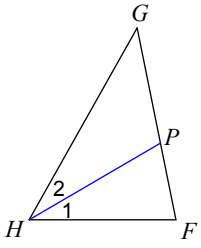
22) Find x if $m\angle 2 = 3x + 7$ and $m\angle 1 = 5x - 5$.



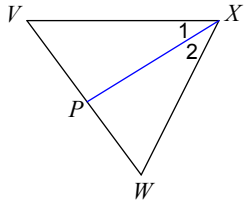
23) $m\angle 2 = 2x + 6$ and $m\angle ECD = 5x + 2$. Find x.



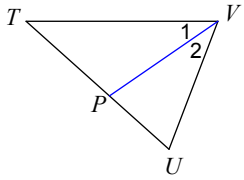
24) Find x if $m\angle 2 = 3x + 9$ and $m\angle FHG = 7x + 11$.



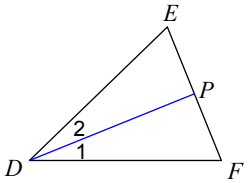
25) $m\angle 2 = 32x - 1$ and $m\angle VXW = 61x + 1$. Find x.



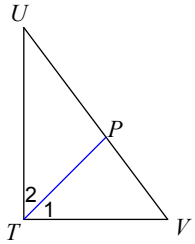
26) Find x if $m\angle 1 = 3x + 13$ and $m\angle 2 = 5x - 1$.



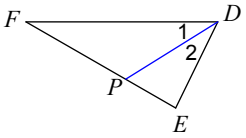
27) $m\angle 1 = 10x + 2$ and $m\angle FDE = 21x + 2$. Find x.



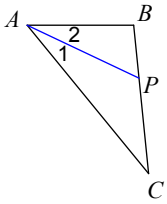
28) Find x if $m\angle 1 = 5 + 4x$ and $m\angle 2 = 5x - 5$.



29) $m\angle 2 = 9x + 5$ and $m\angle 1 = 11x - 1$.
Find x.

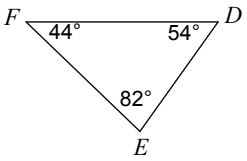


30) $m\angle 2 = 2x + 11$ and $m\angle CAB = 6x + 8$.
Find x.

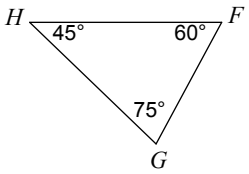


Order the sides of each triangle from shortest to longest.

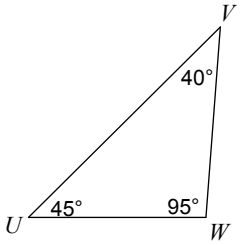
31)



32)



33)



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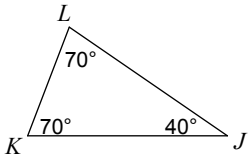
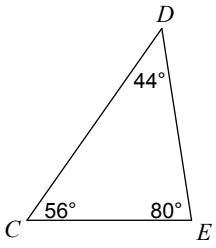


35)



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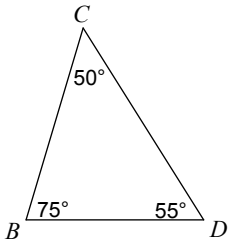
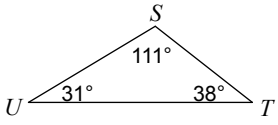
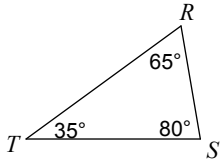


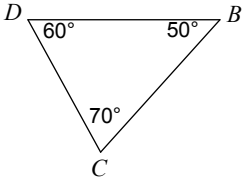
37)



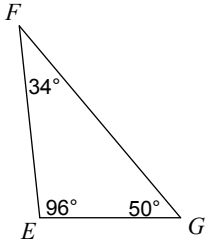
38)



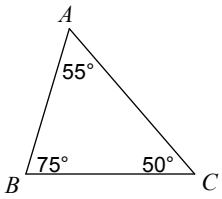
39)



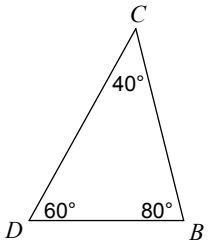
40)



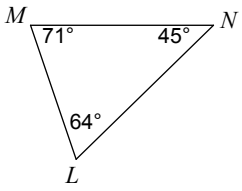
41)



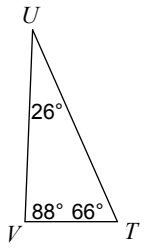
42)



43)



44)



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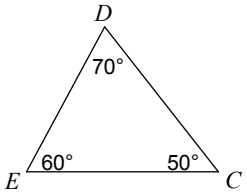
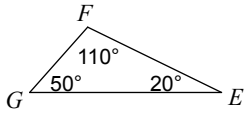
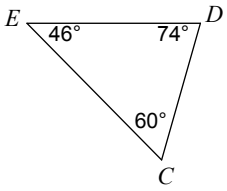


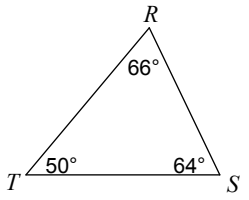
46)



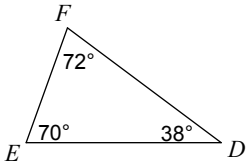
47)



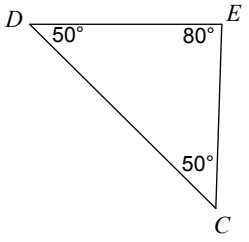
48)



49)

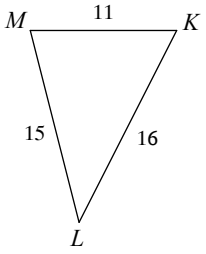


50)

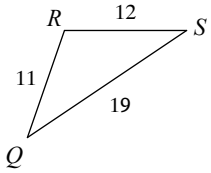


Order the angles in each triangle from smallest to largest.

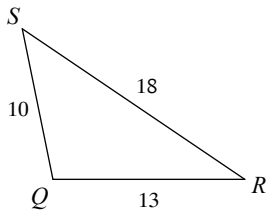
51)



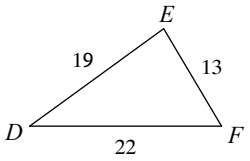
52)



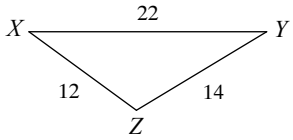
53)



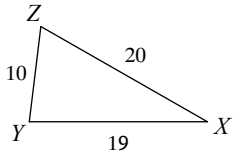
54)



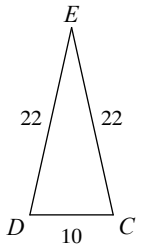
55)



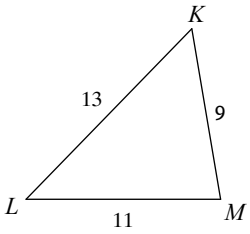
56)



57)



58)



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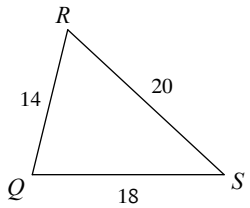

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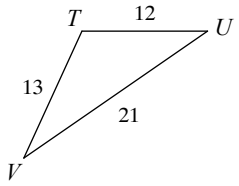

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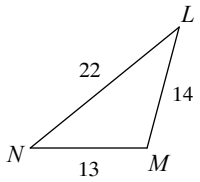
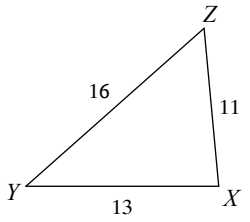


62)



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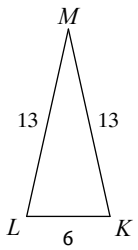
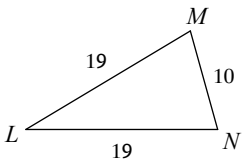


64)



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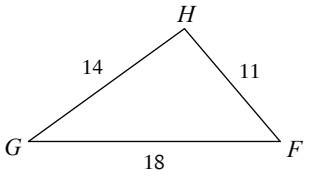

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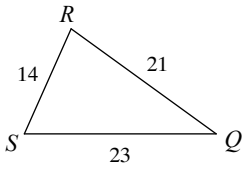

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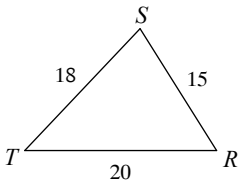
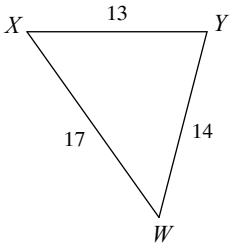
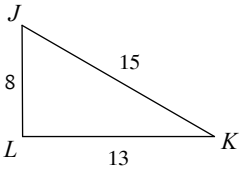


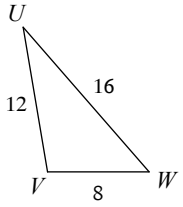
68)



69)



70)



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

71) 7, 12, 22

72) 17, 7, 9

73) 12, 6, 10

74) 11, 6, 3

75) 7, 5, 12

76) 6, 9, 12

77) 8, 12, 14

78) 8, 11, 3

79) 12, 10, 19

80) 9, 11, 12

81) 12, 11, 16

82) 11, 7, 6

83) 8, 14, 10

84) 23, 11, 11

85) 15, 10, 7

86) 6, 12, 11

87) 9, 7, 2

88) 9, 6, 4

89) 12, 8, 12

90) 12, 7, 6

91) 16, 7, 9

92) 10, 8, 2

93) 7, 11, 21

94) 1, 11, 11

95) 2, 10, 9

96) 9, 10, 1

97) 9, 2, 11

98) 16, 9, 10

99) 16, 7, 7

100) 12, 11, 3

101) 11, 7, 16

102) 7, 3, 10

103) 6, 12, 20

104) 7, 10, 7

105) 9, 9, 11

106) 10, 12, 8

107) 8, 7, 9

108) 11, 8, 8

109) 8, 6, 3

110) 6, 15, 11

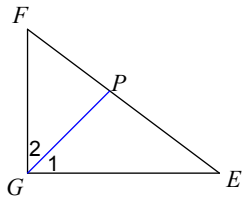
Geometry Name_____ ID: 1

Assignment

Date_____ Period____

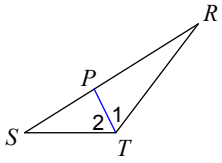
Each figure shows a triangle with one of its angle bisectors.

1) $m\angle 2 = 44x + 1$ and $m\angle EGF = 91x - 1$.
Find x.



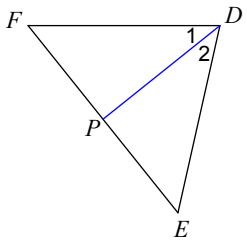
1

2) $m\angle 1 = 16x - 1$ and $m\angle RTS = 30x + 6$.
Find x.



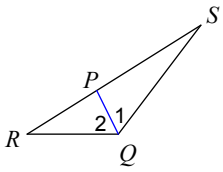
4

3) $m\angle 2 = 19x$ and $m\angle FDE = -2 + 39x$.
Find x.



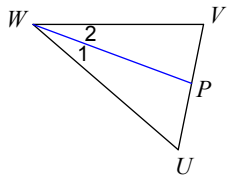
2

4) Find x if $m\angle 2 = 5x + 13$ and $m\angle 1 = -7 + 7x$.



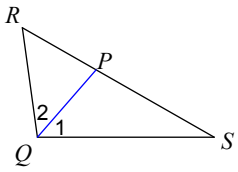
10

5) Find x if $m\angle 2 = 7x - 1$ and $m\angle UWV = 12x + 4$.



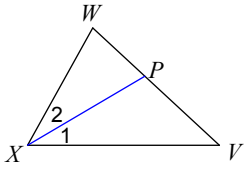
3

6) $m\angle 2 = 6x + 1$ and $m\angle SQR = 11x + 10$.
Find x.



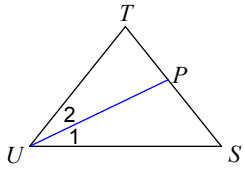
8

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



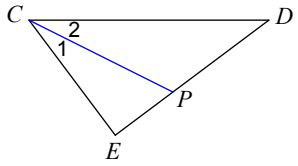
9

8) Find x if $m\angle 2 = 2x + 9$ and $m\angle SUT = 7x - 6$.



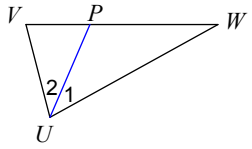
8

9) Find x if $m\angle 2 = 4x - 6$ and $m\angle 1 = 3x + 2$.



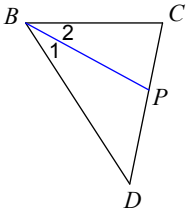
8

10) $m\angle 2 = 9x + 2$ and $m\angle WUV = 20x - 4$. Find x.



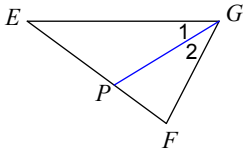
4

11) $m\angle 1 = 9x + 1$ and $m\angle DBC = 19x - 1$. Find x.



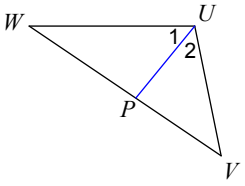
3

12) Find x if $m\angle 2 = 4x - 1$ and $m\angle EGF = 7x + 6$.



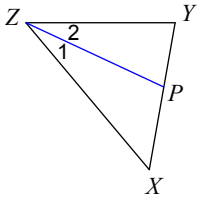
8

13) $m\angle 2 = 7x + 2$ and $m\angle WUV = 15x - 3$. Find x.



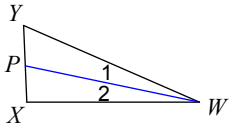
7

14) $m\angle 2 = 7x + 4$ and $m\angle XZY = -1 + 17x$. Find x.



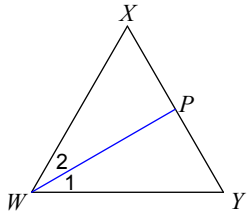
3

15) $m\angle 2 = 3x - 3$ and $m\angle YWX = 4 + 4x$. Find x.



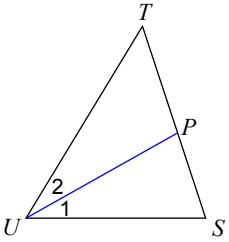
5

16) Find x if $m\angle 1 = 3x$ and $m\angle YWX = 7x - 10$.



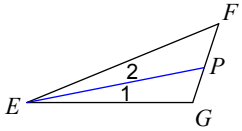
10

17) $m\angle 1 = 3x + 8$ and $m\angle SUT = 7x + 9$. Find x.



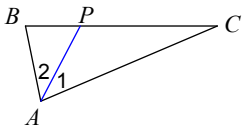
7

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



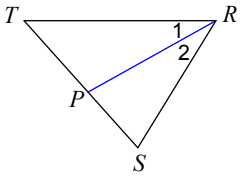
2

19) $m\angle 1 = 5x + 9$ and $m\angle CAB = 14x - 6$. Find x.



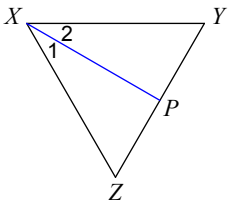
6

20) Find x if $m\angle 2 = 2x + 11$ and $m\angle TRS = 7x - 5$.



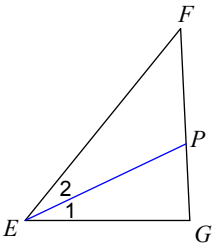
9

21) Find x if $m\angle 2 = 31x - 1$ and $m\angle 1 = 29x + 1$.



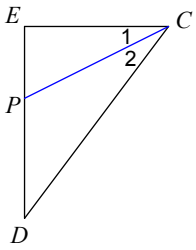
1

22) Find x if $m\angle 2 = 3x + 7$ and $m\angle 1 = 5x - 5$.



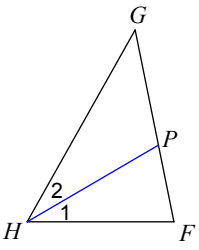
6

23) $m\angle 2 = 2x + 6$ and $m\angle ECD = 5x + 2$. Find x.



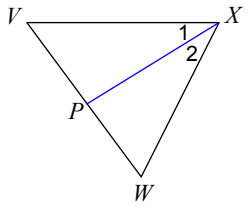
10

24) Find x if $m\angle 2 = 3x + 9$ and $m\angle FHG = 7x + 11$.



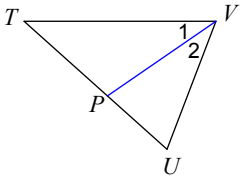
7

25) $m\angle 2 = 32x - 1$ and $m\angle VXW = 61x + 1$. Find x.



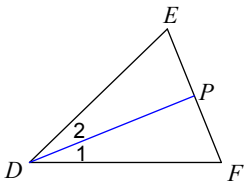
1

26) Find x if $m\angle 1 = 3x + 13$ and $m\angle 2 = 5x - 1$.



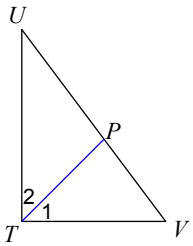
7

27) $m\angle 1 = 10x + 2$ and $m\angle FDE = 21x + 2$. Find x.



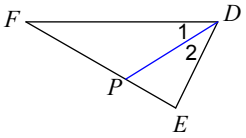
2

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



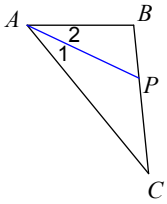
10

29) $m\angle 2 = 9x + 5$ and $m\angle 1 = 11x - 1$.
Find x.



3

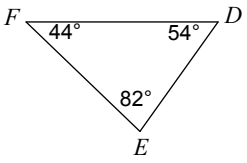
30) $m\angle 2 = 2x + 11$ and $m\angle CAB = 6x + 8$.
Find x.



7

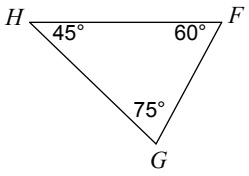
Order the sides of each triangle from shortest to longest.

31)



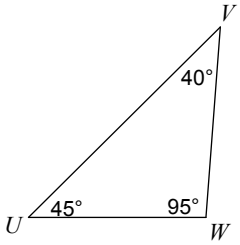
$\overline{DE}, \overline{EF}, \overline{DF}$

32)



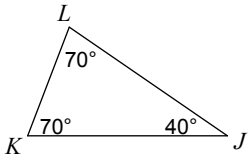
$\overline{FG}, \overline{GH}, \overline{FH}$

33)



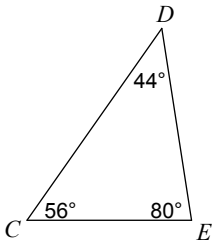
$\overline{UW}, \overline{VW}, \overline{UV}$

34)



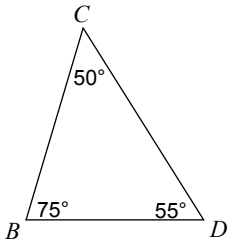
$\overline{KL}$; $\overline{JL}$ and $\overline{JK}$

35)



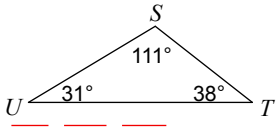
$\overline{CE}, \overline{DE}, \overline{CD}$

36)



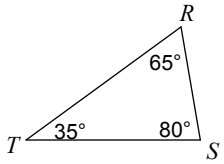
$\overline{BD}, \overline{BC}, \overline{CD}$

37)



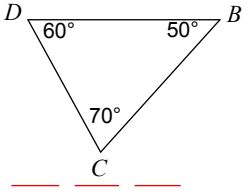
$\overline{ST}, \overline{SU}, \overline{TU}$

38)



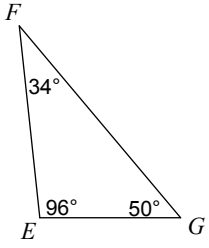
$\overline{RS}, \overline{ST}, \overline{RT}$

39)



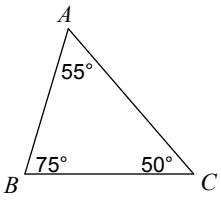
$\overline{CD}, \overline{BC}, \overline{BD}$

40)



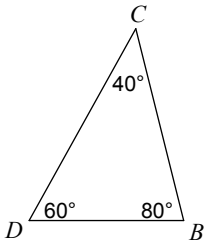
$\overline{EG}, \overline{EF}, \overline{FG}$

41)



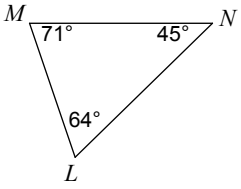
$\overline{BA}, \overline{CB}, \overline{CA}$

42)



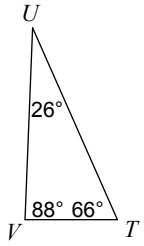
$\overline{DB}, \overline{CB}, \overline{DC}$

43)



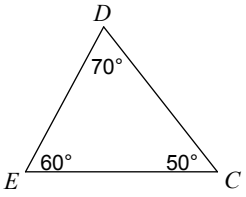
$\overline{LM}, \overline{MN}, \overline{LN}$

44)



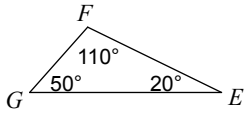
$\overline{VT}, \overline{VU}, \overline{UT}$

45)



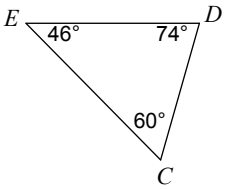
$\overline{ED}, \overline{DC}, \overline{EC}$

46)



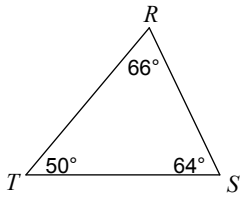
$\overline{GF}, \overline{FE}, \overline{GE}$

47)



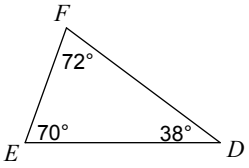
$\overline{DC}, \overline{ED}, \overline{EC}$

48)



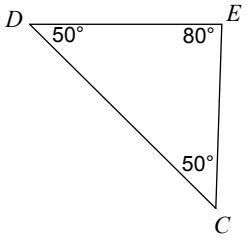
$\overline{RS}, \overline{RT}, \overline{ST}$

49)



$\overline{EF}, \overline{DF}, \overline{DE}$

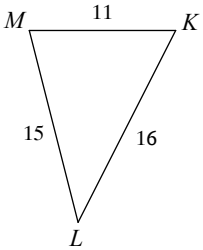
50)



$\overline{DE}$ and $\overline{CE}$; $\overline{CD}$

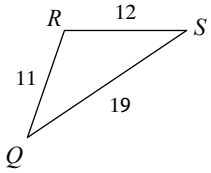
Order the angles in each triangle from smallest to largest.

51)



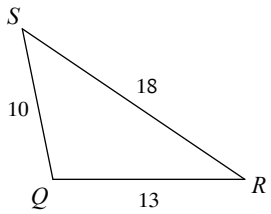
$\angle L, \angle K, \angle M$

52)



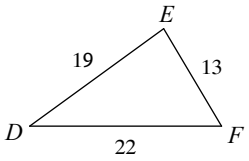
$\angle S, \angle Q, \angle R$

53)



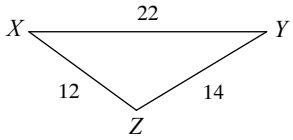
$\angle R, \angle S, \angle Q$

54)



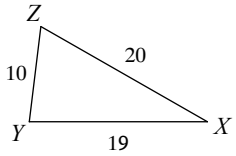
$\angle D, \angle F, \angle E$

55)



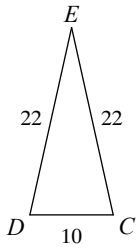
$\angle Y, \angle X, \angle Z$

56)



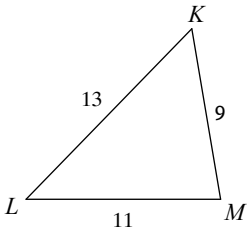
$\angle X, \angle Z, \angle Y$

57)



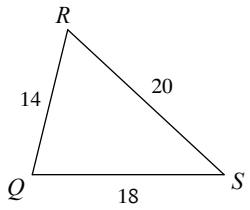
$\angle E$; $\angle C$ and $\angle D$

58)



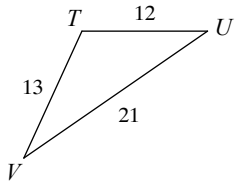
$\angle L, \angle K, \angle M$

59)



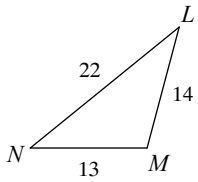
$\angle S, \angle R, \angle Q$

60)



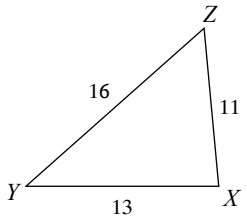
$\angle V, \angle U, \angle T$

61)



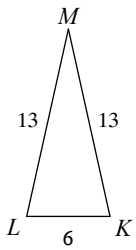
$\angle L, \angle N, \angle M$

62)



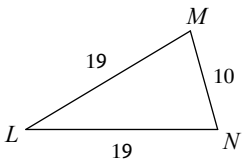
$\angle Y, \angle Z, \angle X$

63)



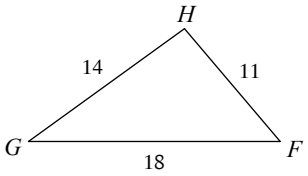
$\angle M$; $\angle K$ and $\angle L$

64)



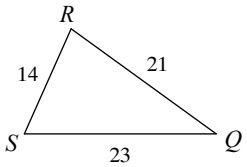
$\angle L$; $\angle M$ and $\angle N$

65)



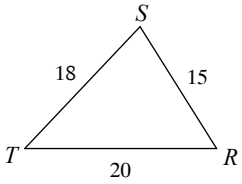
$\angle G, \angle F, \angle H$

66)



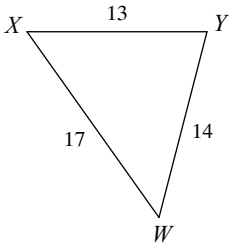
$\angle Q, \angle S, \angle R$

67)



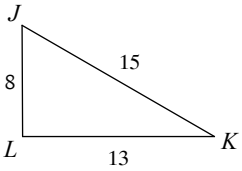
$\angle T, \angle R, \angle S$

68)



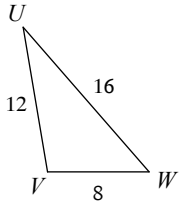
$\angle W, \angle X, \angle Y$

69)



$\angle K, \angle J, \angle L$

70)



$\angle U, \angle W, \angle V$

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

71) 7, 12, 22
No

72) 17, 7, 9
No

73) 12, 6, 10
Yes

74) 11, 6, 3
No

75) 7, 5, 12
No

76) 6, 9, 12
Yes

77) 8, 12, 14
Yes

78) 8, 11, 3
No

79) 12, 10, 19
Yes

80) 9, 11, 12
Yes

81) 12, 11, 16
Yes

82) 11, 7, 6
Yes

83) 8, 14, 10
Yes

84) 23, 11, 11
No

85) 15, 10, 7
Yes

86) 6, 12, 11
Yes

87) 9, 7, 2
No

88) 9, 6, 4
Yes

89) 12, 8, 12
Yes

90) 12, 7, 6
Yes

91) 16, 7, 9
No

92) 10, 8, 2
No

93) 7, 11, 21
No

94) 1, 11, 11
Yes

95) 2, 10, 9
Yes

96) 9, 10, 1
No

97) 9, 2, 11
No

98) 16, 9, 10
Yes

99) 16, 7, 7
No

100) 12, 11, 3
Yes

101) 11, 7, 16
Yes

102) 7, 3, 10
No

103) 6, 12, 20
No

104) 7, 10, 7
Yes

105) 9, 9, 11
Yes

106) 10, 12, 8
Yes

107) 8, 7, 9
Yes

108) 11, 8, 8
Yes

109) 8, 6, 3
Yes

110) 6, 15, 11
Yes