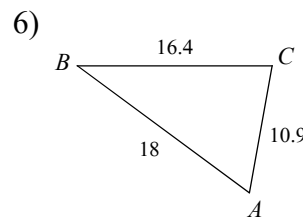
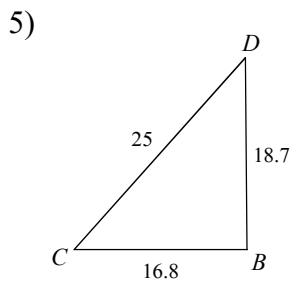
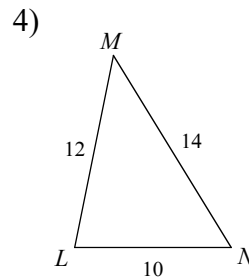
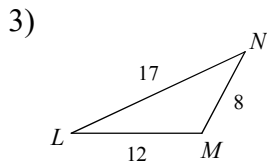
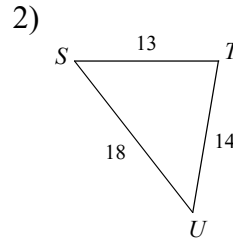
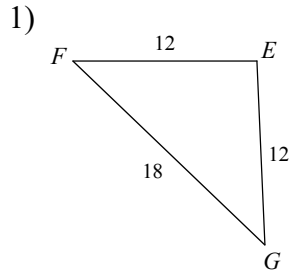


### 2.4.3 Triangle Inequalities

Order the angles in each triangle from smallest to largest.



7) In  $\triangle QRS$   
 $RS = 10.2$   
 $QS = 17$   
 $QR = 13.6$

8) In  $\triangle DEF$   
 $EF = 17$   
 $DF = 13.1$   
 $DE = 10.5$

9) In  $\triangle KLM$   
 $LM = 11.1$   
 $KM = 13$   
 $KL = 6.8$

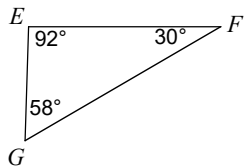
10) In  $\triangle EFG$   
 $FG = 12$   
 $EG = 7$   
 $EF = 8.4$

11) In  $\triangle RQP$   
 $QP = 12.4$   
 $RP = 15$   
 $RQ = 14.3$

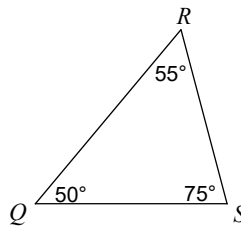
12) In  $\triangle ABC$   
 $BC = 10.9$   
 $AC = 19$   
 $AB = 12.8$

Order the sides of each triangle from shortest to longest.

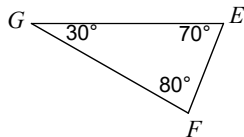
13)



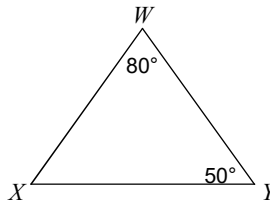
14)



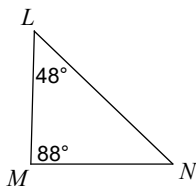
15)



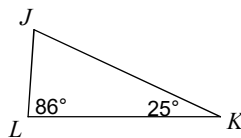
16)



17)



18)



19) In  $\triangle KLM$   
 $m\angle K = 101^\circ$   
 $m\angle M = 36^\circ$

20) In  $\triangle KLM$   
 $m\angle K = 30^\circ$   
 $m\angle L = 80^\circ$   
 $m\angle M = 70^\circ$

21) In  $\triangle CDE$   
 $m\angle C = 30^\circ$   
 $m\angle D = 90^\circ$   
 $m\angle E = 60^\circ$

22) In  $\triangle XYZ$   
 $m\angle X = 31^\circ$   
 $m\angle Y = 60^\circ$   
 $m\angle Z = 89^\circ$

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

23) 8, 8, 16

24) 3, 7, 10

25) 9, 3, 6

26) 7, 8, 11

27) 2, 9, 11

28) 3, 10, 8

29) 8, 18, 8

30) 9, 9, 17

31) 10, 12, 11

32) 6, 3, 8

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

33) 8, 12

34) 10, 12

35) 8, 9

36) 12, 12

37) 12, 7

38) 8, 10

39) 6, 11

40) 11, 11

41) 7, 10

42) 6, 8