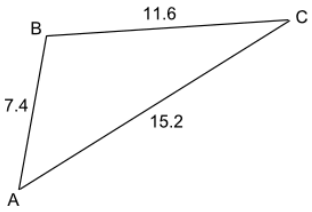
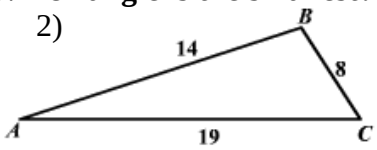
5.1 HW: Show your work! Name:_____

For #1 – 3, which angle is the largest? Which angle is the smallest?

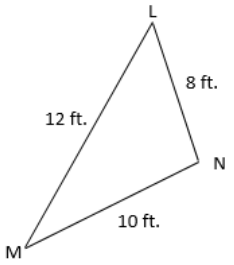
1)



2)

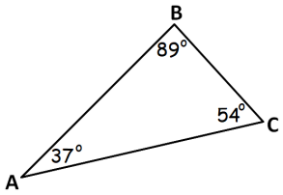


3)

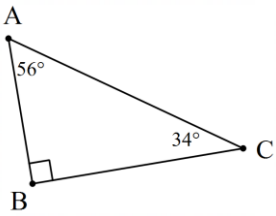


For #4 – 6, which side is the longest? Which side is the smallest?

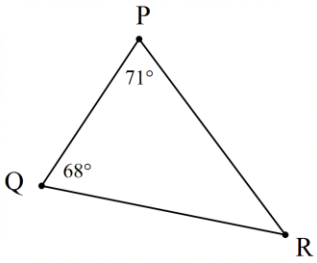
4)



5)

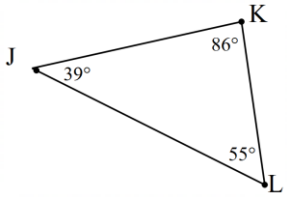


6)



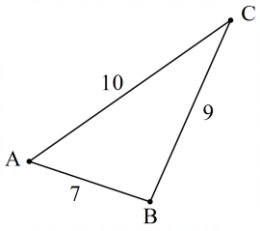
7) Multiple Choice. Which statement(s) below are true for the triangle shown? Choose all that apply.

A) $JK < JL$
B) $JL < KL$
C) $KL < JK < JL$
D) $KL < JL < JK$



8) Multiple Choice. Which statement(s) below are true for the triangle shown? Choose all that apply.

A) $m\angle B < m\angle A$
B) $m\angle C < m\angle B$
C) $m\angle C < m\angle B < m\angle A$
D) $m\angle C < m\angle A < m\angle B$



For #9 – 13, can the three given lengths be used as sides to make a real triangle? Explain.

9) 4, 6, 5

10) 2, 2, 4

11) 9, 3, 7

12) 8, 20, 9

13) 7, 7, 7

For #14 – 18, given the lengths of two sides of a triangle, find the range of values for the missing side.

14) 18, 18

15) 14, 20

16) 3.2, 4.6

17) 2, 5

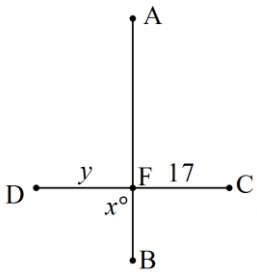
18) 31, 36

Geometry **Ch 5 HW Packet: More About Triangles** **2022**

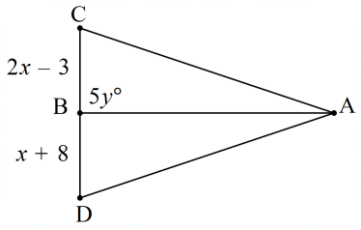
5.2 HW: Show your work! Name:_____

For #1 – 3, find the value of each variable, given that AB is the perpendicular bisector of CD.

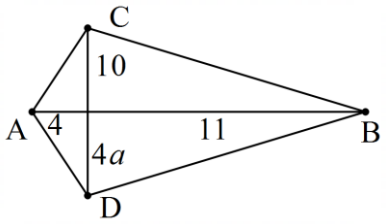
1)



2)



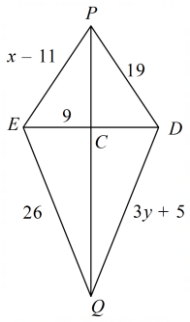
3)



For #4 – 7, PQ is the $\perp$ bisector of DE.

4) Find x.

5) Find y.



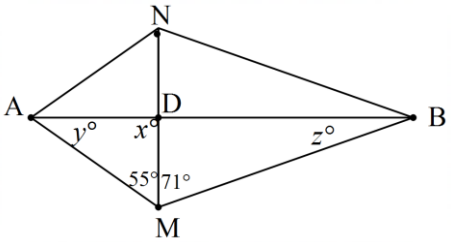
6) Find the perimeter of ΔEDP.

7) Find the perimeter of ΔEDQ.

For #8 – 10, AB is the $\perp$ bisector of MN.

8) Find x.

9) Find y.

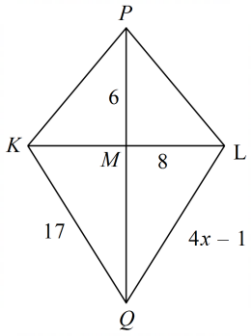


10) Find z.

For #11-12 PQ is the $\perp$ bisector of KL.

11) Find PL.
(Hint: $a^2 + b^2 = c^2$)

12) Find x.

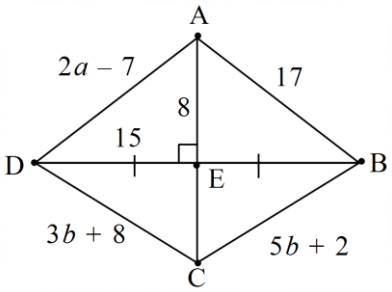


13) Find the perimeter of ΔLMP.

For #14 – 17, use the diagram shown.

14) Find a.

15) Find b.



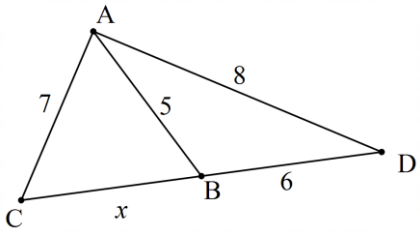
16) Find the perimeter of ΔABD.

17) Find the area of ΔADE.

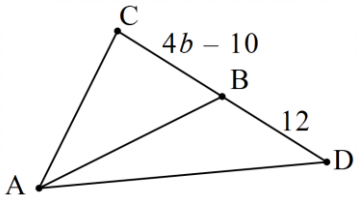
5.3 HW: Show your work! Name:_____

For #1 – 3, find value of each variable if AB is a median.

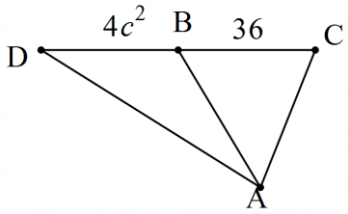
1)



2)

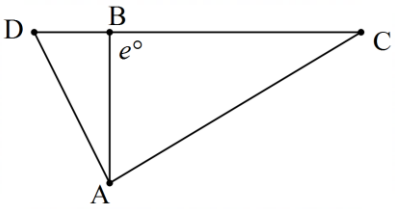


3)

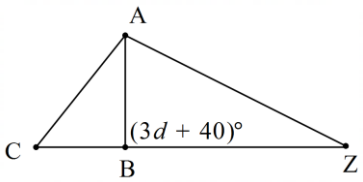


For #4 – 6, find the value of each variable if AB is an altitude.

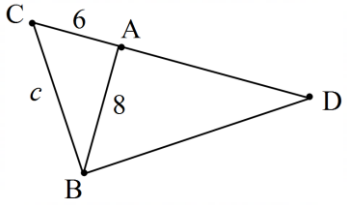
4)



5)



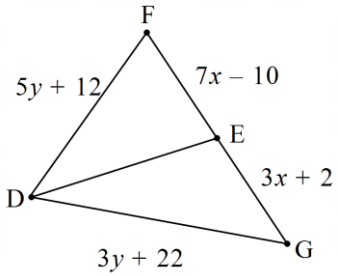
6)



For #7 – 9, DE is a median. Also, DF = DG.

7) Find x.

8) Find y.

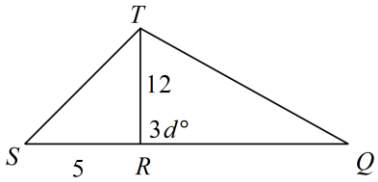


9) Find the perimeter of ΔDFG.

For #10 – 13, TR is an altitude.

10) Find d.

11) Find TS.

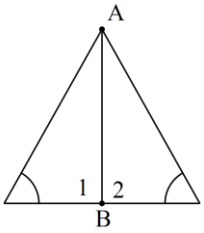


12) Find the perimeter of ΔRST.

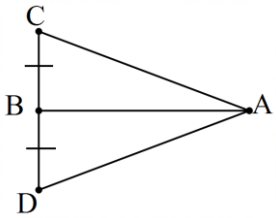
13) Find the area of ΔRST.

For #14 – 15, give the reason for why each pair of triangles in congruent.

14) AB is a median, and $\angle 1 \cong \angle 2$.



15) AB is an altitude.



16) Given three segments of lengths 7 cm, 9 cm, and 16 cm. Could they be connected to form a triangle? Explain your reasoning.

17) Given that two sides of a triangle are 12 inches and 19 inches. Find the range of values for the third side of the triangle.