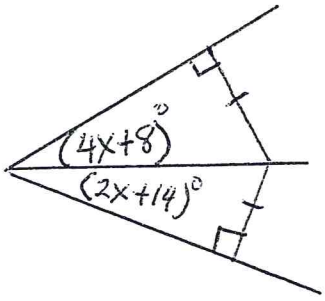
Math 2 Unit 6 Review #1

1. Use a compass and straightedge to construct:

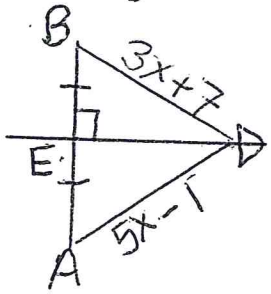
a) angle bisector

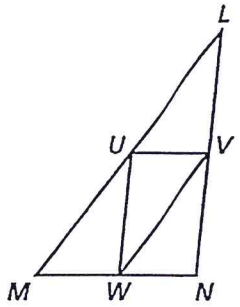
b) perpendicular bisector

2. Find $m\angle DAC$



3. Find the length of $\overline{BD}$





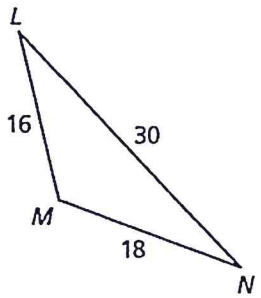
In Exercises 5–8, use triangle LMN where *U*, *V*, and *W* are the midpoints of the sides.

5. **When** $LV = 9$, what is UW? **When** MN = 12 what is UV?

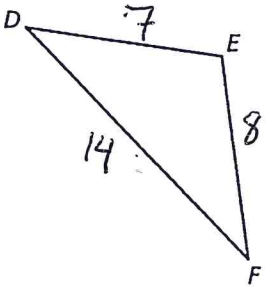
6. **When** $LU = 2(x - 5)$ and $VW = 8 - x$, **what is** LM?

In Exercises 7 and 8, list the angles of the given triangle from smallest to largest.

7.

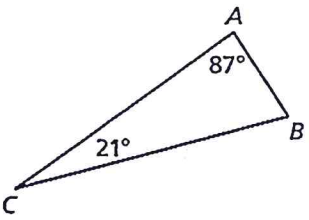


8.

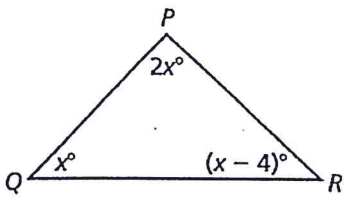


In Exercises 9 and 10, list the sides of the given triangle from shortest to longest.

9.



10.



In Exercises 11 and 12, is it possible to construct a triangle with the given side lengths? Justify your answer using a compound inequality.

11. 15, 37, 53

12. 9, 16, 8

In Exercises # 13 and 14, give the possible values, x, for the third side of triangle given the first two sides as shown below.

Use a compound inequality to justify your answers.

13. 5m and 12m

14. 18 ft. and 17 ft.

In Exercises # 15 and #16, find the midpoint of the segment with the given endpoints AND find the length of the segment.

15. J(-8, 0) K(1, 4)

Midpoint of $\overline{JK}$

Length of JK
(distance)

16. C(-2, 2) D(0, -4)

Midpoint of $\overline{CD}$

Length of CD
(distance)

17. Complete the two-column proof.

Given: a // b, c // d

Prove: $\angle 1 \cong \angle 3$

Statements	reasons
1. _____	1. _____
2. $\angle 1 \cong \angle 2$ _____	2. _____
3. _____	3. If //, then alt ext $\angle$s $\cong$
4. _____	4. _____