

02/20/2025 – Angles and Triangles

Review of Unit 9 for Grade 7 and Unit 7 for Grade 8 (7A and PreAlgebra) – Fun theme: Baseball
Questions to follow along with show. Watch: [Math Homework Hotline](#)

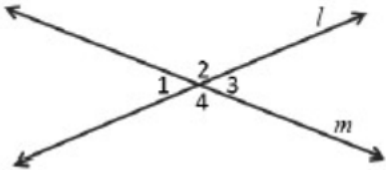
1) A carpenter needs to determine which set of lengths will make a triangle to be able to use it in his baseball design.

- Option 1: Side lengths: 4, 4, 8
- Option 2: Side lengths: 6, 8, 10
- Option 3: Side lengths: 6, 6, 13

Which of the options would create a triangle for his design? (MA.8.GR.1.3)

2) Jo drew a triangle with side lengths of 5, 12 and 13. Her friend, Bry, looked at it and asked if it is a right triangle. Jo’s response was yes. Explain or show how Jo can prove to Bry that the triangle is a right triangle. (MA.8.GR.1.3)

3) The measure of angle 1 is 12 more than the measure of angle 2. What is the degree measure of angle 3? (MA.8.GR.1.4)



4) Determine if each of the following statements is always true, sometimes true, or never true. Provide an example and non-example for Sometimes True. (MA.8.GR.1.4)

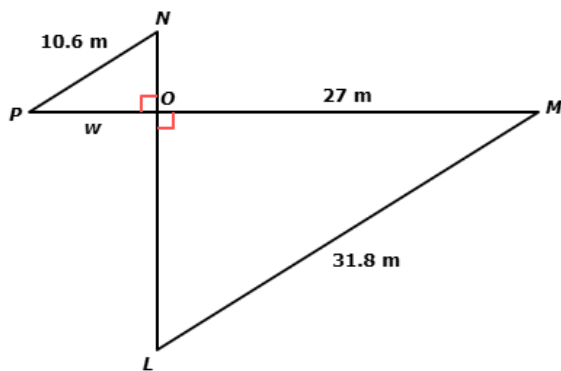
Statement	Always True	Sometimes True	Never True
The sum of the measures of two supplementary angles is 180°.			
Vertical angles are also adjacent angles.			
Two adjacent angles are complementary.			

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- 5) In triangle LMN, the measure of angle L is 50° and the measure of angle M is 70° . What is the measure of the exterior angle to angle N? (MA.8.GR.1.5)

- 6) One measure of an angle in a triangle is 96° . The other two angle measures are represented by $2x$ and $x + 12$. Determine the other two degree measures for the missing angles. (MA.8.GR.1.5)

- 7) $\triangle PON$ is similar to $\triangle MOL$. Find w . (MA.8.GR.2.4)



- 8) A baseball light pole that is 4 meters tall casts a shadow that is 3 meters long. Nearby, a lookout tower casts a shadow 9 meters long. How tall is the lookout tower? (MA.8.GR.2.4)

- 9) Find the number of degrees for the sum of the interior angles of a regular 12-sided figure. (MA.8.GR.1.6)

- 10) What is the value of x in the baseball diamond below? (MA.8.GR.1.6)

