# **Math 7 B Unit Test Guide**

## Triangles Unit Test

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| **Item** | **Lesson Coverage** | **Objective** | **Lesson Page** | **Assessment Item** |
| 1 | Lesson 2: Triangle Angle Sum Theorem | Use the triangle angle sum theorem to find a missing angle in a triangle given the other two angles.  | p. 1-6 | Identify the combination of angle measures that could form a triangle.Answer: $25°, 65°, 90°$ |
| 2 | Lesson 2: Triangle Angle Sum Theorem | Use the triangle angle sum theorem to find a missing angle in a triangle given the other two angles.  | p. 1-6 | The angles of a triangle measure 2x, 3x, and 4x. Using the Triangle Angle Sum Theorem, find the measure of the smallest angle in this triangle.Answer: $40°$ |
| 3 | Lesson 2: Triangle Angle Sum Theorem | Use the triangle angle sum theorem to find a missing angle in a triangle given the other two angles.  | p. 1-6 | *Use the image to answer the question.*Use the Triangle Angle Sum Theorem to find the measure of the angle on point *C*.Answer: $81°$ |
| 4 | Lesson 2: Triangle Angle Sum Theorem | Use the triangle angle sum theorem to find missing angles in a triangle given algebraic expressions for the measure of each angle. | p. 7-11 | Use the Triangle Angle Sum Theorem to find the largest angle in a triangle with angle measures of $\left(x-20\right)°, \left(3x+3\right)°, and \left(2x+7\right)°$.Answer: $105°$ |
| 5 | Lesson 2: Triangle Angle Sum Theorem | Use the triangle angle sum theorem to find missing angles in a triangle given algebraic expressions for the measure of each angle. | p. 7-11 | *Use the image to answer the question.*Find the measure of the smallest angle of the triangle.Answer: $36°$ |
| 6 | Lesson 3: Triangle Inequality Theorem | Determine the conditions relating to whether three segments can form a triangle. | p. 1-5 | Two sides of a triangle are 10 mm and 7 mm. Determine the length of the third side from the choices given.Answer: 5 mm |
| 7 | Lesson 3: Triangle Inequality Theorem | Determine the conditions relating to whether three segments can form a triangle. | p. 1-5 | Complete the condition statements that must be met in order for three side lengths – *a*, *b*, and *c* – to create a triangle.*a \_\_\_\_\_ b + c* and *a \_\_\_\_\_ b – c*Answer: < ; > |
| 8 | Lesson 3: Triangle Inequality Theorem | Determine the conditions relating to whether three segments can form a triangle. | p. 1-5 | *Use the image to answer the question.*Complete the inequality so that it represents the whole-number values that side a could be to create a triangle.*\_\_\_\_\_ < a < \_\_\_\_\_*Answer: 1; 13 |
| 9 | Lesson 3: Triangle Inequality Theorem | Apply the triangle inequality theorem. | p. 6-11 | Apply the Triangle Inequality Theorem to determine which three side lengths form a triangle.Answer: 10, 20, 15 |
| 10 | Lesson 3: Triangle Inequality Theorem | Apply the triangle inequality theorem. | p. 6-11 | Apply the Triangle Inequality Theorem to determine the possible whole number measures of the third side of a triangle if the first two sides measure 6 and 2. List them in ascending order.The measure of the third side could be \_\_\_\_\_, \_\_\_\_\_, or \_\_\_\_\_.Answer: 5; 6; 7 |
| 11 | Lesson 3: Triangle Inequality Theorem | Apply the triangle inequality theorem. | p. 6-11 | *Use the image to answer the question.*A triangle has no congruent sides. The lengths of two sides of the triangle are *AB* and *BD*. Use the number line above to determine the lengths of *AB* and *BD*. Then, use the Triangle Inequality Theorem to determine which two segments have lengths that could be used as the third side of the triangle. Select a response containing 2 possible answers.Answer: *AC* and *BC* |
| 12 | Lesson 2: Triangle Angle Sum Theorem | Use the triangle angle sum theorem to find missing angles in a triangle given algebraic expressions for the measure of each angle. | p. 7-11 | A right triangle has acute angles measuring $2x=6$ degrees and $3x-26$ degrees. Use the Triangle Angle Sum Theorem to find the measures of the missing angles of the triangle.Answer: The angles of the triangle measure 40 degrees, 50 degrees, and 90 degrees. |