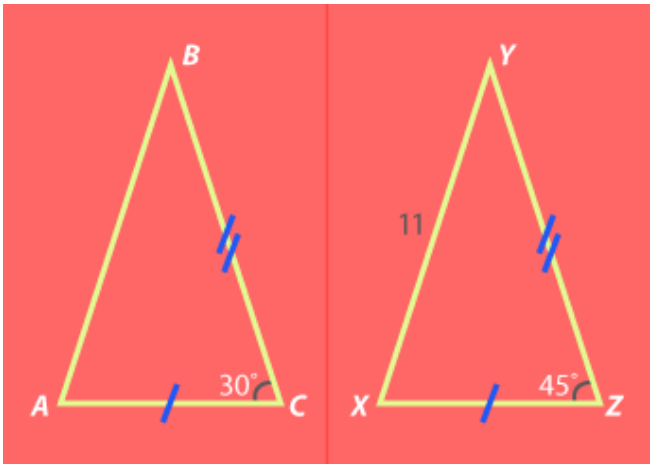
Directions: Please choose the best answer choice for each of the following questions.

1. Given the figure below, which of the following could be the length of AB?



A. 9

B. 11

C. 15

D. 19

Answer Choice Rationale

A. Correct

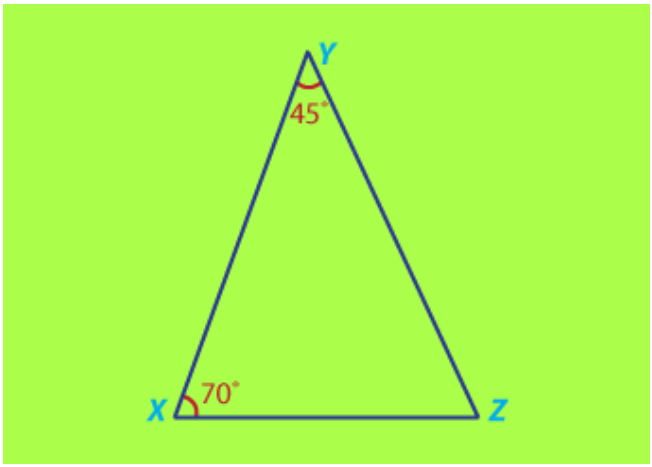
B. No rationale available

C. No rationale available

D. No rationale available

ItemID saltsmad.2983
Correct A
Standard(s) MA.9-12.MA.912.G.4.7

2. Which of the following statements regarding the figure below is true?



A. XZ is the longest side of Δ*XYZ*.

B. YZ is the longest side of Δ*XYZ*.

C. XY is the longest side of Δ*XYZ*.

D. YZ is the shortest side of Δ*XYZ*.

Answer Choice Rationale

A. No rationale available

B. Correct

C. No rationale available

D. No rationale available

ItemID saltsmad.2985
Correct B
Standard(s) MA.9-12.MA.912.G.4.7

3. In ΔPQR , $PQ = 12$ inches and $QR = 20$ inches. Which inequality describes the range of possible lengths for $\overline{PR}$?

A. $0 \text{ inches} < PR < 32 \text{ inches}$

B. $0 \text{ inches} \leq PR \leq 32 \text{ inches}$

C. $8 \text{ inches} < PR < 32 \text{ inches}$

D. $8 \text{ inches} \leq PR \leq 32 \text{ inches}$

Answer Choice Rationale

A. The right side of the inequality is correct. However, the lower boundary should be the difference of 20 and 12 rather than 0.

B. If *PR* equals 32 inches, it is a straight line, but it is impossible for two sides of a triangle to form a straight line. Also, it is impossible for one of the sides to have a length of 0 inches.

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C. Correct answer

D. This inequality would be correct if *less than* symbols were used rather than *less than or equal to* symbols. It is impossible for *PR* to equal 32 inches or to equal 8 inches as the two sides would form a straight line.

ItemID A2K.1021388
Correct C
Standard(s) MA.9-12.MA.912.G.4.7

4. Kendra is making a triangular tabletop. She measures one side of the top to be 7 inches and another to be 9 inches. Which of the following CANNOT be the length of the third side?

A. 11 inches

B. 13 inches

C. 15 inches

D. 17 inches

Answer Choice Rationale

A. Sides of 7 inches, 9 inches, and 11 inches meet the triangle inequality theorem.

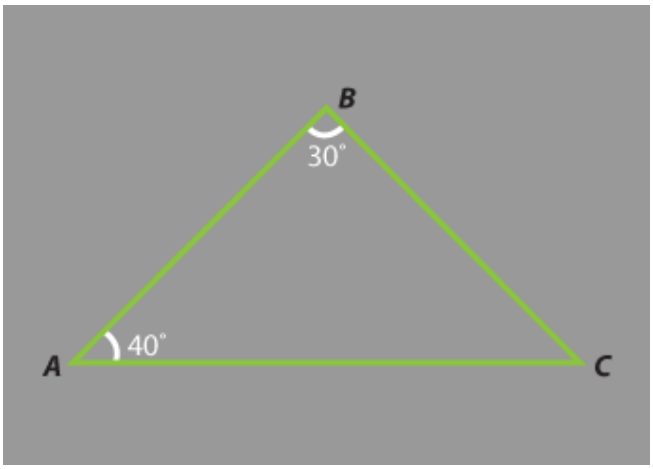
B. Sides of 7 inches, 9 inches, and 13 inches meet the triangle inequality theorem.

C. Sides of 7 inches, 9 inches, and 15 inches meet the triangle inequality theorem.

D. Correct answer.

ItemID A2K.1012067
Correct D
Standard(s) MA.9-12.MA.912.G.4.7

5. Which of the following statements regarding the figure below is true?



A. AB is the longest side of Δ*ABC*.

B. AC is the longest side of Δ*ABC*.

C. BC is the shortest side of Δ*ABC*.

D. AB is the shortest side of Δ*ABC*.

Answer Choice Rationale

A. Correct

B. No rationale available

C. No rationale available

D. No rationale available

ItemID saltsmad.2982
Correct A
Standard(s) MA.9-12.MA.912.G.4.7

Stop! You have finished this exam.