Name: _____

G.SRT.D.10: Law of Sines - The Ambiguous Case 2

1 If $a = 4$, $b = 5$, and $m\angle A = 30$, the number of distinct triangles that may be constructed is
1) 1 2) 2 3) 3 4) 0

2 If $a = 6$, $b = 5$, and $m\angle A = 30$, the number of distinct triangles which can be constructed is
1) 1 2) 2 3) 3 4) 0

3 If $m\angle A = 30$, $a = \sqrt{5}$, and $b = 6$, the number of triangles that can be constructed is
1) 1 2) 2 3) 0 4) an infinite number

4 How many distinct triangles can be formed if $m\angle A = 30$, $b = 12$ and $a = 6$?
1) 1 2) 2 3) 3 4) 0

5 How many distinct triangles can be constructed if $m\angle A = 30$, $b = 12$, and $a = 7$?
1) 1 2) 2 3) 3 4) 0

6 If $m\angle A = 30$, $a = 11$, and $b = 12$, the number of distinct triangles that can be constructed is
1) 1 2) 2 3) 3 4) 0

7 If $a = 5$, $b = 7$, and $m\angle A = 30$, how many distinct triangles can be constructed?
1) 1 2) 2 3) 3 4) 0

8 If $a = 5$, $c = 18$ and $m\angle A = 30$, what is the total number of distinct triangles that can be constructed?
1) 1 2) 2 3) 3 4) 0

9 How many distinct triangles can be formed if $a = 20$, $b = 30$, and $m\angle A = 30$?
1) 1 2) 2 3) 3 4) 0

10 What is the maximum number of distinct triangles that can be formed if $m\angle A = 30$, $b = 8$, and $a = 5$?
1) 1 2) 2 3) 3 4) 0

11 How many distinct triangles can be constructed if $m\angle A = 60$, side $a = 5\sqrt{3}$, and side $b = 10$?
1) 1 2) 2 3) 3 4) 0

12 If $a = 5\sqrt{2}$, $b = 8$, and $m\angle A = 45$, how many distinct triangles can be constructed?
1) 1 2) 2 3) 3 4) 0

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13 If m∠A = 45, AB = 10, and BC = 8, the greatest number of distinct triangles that can be constructed is
1) 1 2) 2 3) 3 4) 0

14 If m∠ABC = 135, AC = 9, and AB = 10, what is the maximum number of distinct triangles that can be constructed?
1) 1 2) 2 3) 3 4) 0

15 If m∠A = 50, side a = 6, and side b = 10, what is the maximum number of distinct triangles that can be constructed?
1) 1 2) 2 3) 3 4) 0

16 If m∠A = 68, side a = 10, and side b = 24, how many distinct triangles can be constructed?
1) 1 2) 2 3) 3 4) 0

17 If m∠A = 125, AB = 10, and BC = 12, what is the number of distinct triangles that can be constructed?
1) 1 2) 2 3) 3 4) 0

18 If m∠A = 28°10′, a = 20, and b = 25, what is the maximum number of distinct triangles that can be constructed?
1) 1 2) 2 3) 3 4) 0

19 If m∠A = 30, side a = 6, and side b = 10, what is the total number of noncongruent triangles that can be constructed?

20 Determine the maximum number of triangles possible when m∠A = 150, a = 14, and b = 10.

21 If side a = 16, side b = 20, and m∠A = 30, how many distinct triangles can be constructed?
1) one acute triangle, only 2) two triangles
3) one obtuse triangle, only 4) no triangles

22 Which statement best describes a triangle that can be constructed if m∠A = 30, $a = \frac{1}{4}$, and $b = \frac{1}{2}$?
1) It is a right triangle. 2) It is an obtuse triangle. 3) It is not unique. 4) It cannot be constructed.

23 If m∠A = 32, a = 5 and b = 3, it is possible to construct
1) an obtuse triangle 2) two distinct triangles
3) no triangles 4) a right triangle

24 If a = 5, c = 4, and m∠A = 40, then which type of triangle, if any, can be constructed?
1) a right triangle, only 2) an acute triangle, only 3) an obtuse triangle, only 4) no triangle

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Answer Section

1	ANS: 2	REF: 068124siii
2	ANS: 1	REF: 018735siii
3	ANS: 3	REF: 018934siii
4	ANS: 1	REF: 019028siii
5	ANS: 2	REF: 069035siii
6	ANS: 2	REF: 089033siii
7	ANS: 2	REF: 069534siii
8	ANS: 4	REF: 069834siii
9	ANS: 2	REF: 010023siii
10	ANS: 2	REF: 060127siii
11	ANS: 1	REF: 010330siii
12	ANS: 2	REF: 089529siii
13	ANS: 2	REF: 019834siii
14	ANS: 4	REF: 080134siii
15	ANS: 4	REF: 060335siii
16	ANS: 4	REF: 010433siii
17	ANS: 1	REF: 069633siii
18	ANS: 2	REF: 010231siii
19	ANS: 2	REF: 018513siii
20	ANS: 1	REF: 060015siii
21	ANS: 2	REF: 080323siii
22	ANS: 1	REF: 080231siii
23	ANS: 1	REF: 080031siii
24	ANS: 3	REF: 010135siii