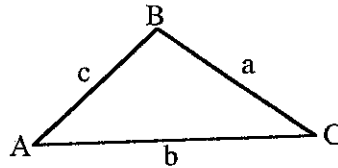Trigonometry
Worksheet: Finding the area of a triangle

1) In what situation is it best to use the area formula, Area $= \frac{1}{2} bc \sin A$?
 a) When you are given SSA.
 b) When you are given ASA.
 c) When you are given SAS.
 d) When you are given SSS.

2) In what situation is it best to use the area formula, Area $= \sqrt{s(s-a)(s-b)(s-c)}$?
 a) When you are given SSA.
 b) When you are given ASA.
 c) When you are given SAS.
 d) When you are given SSS.

In each of the following problems, you are given three measures for a triangle. The angle and side labels are based on the figure below, although the figure is not to scale. In each problem, find the area of that triangle.

3) Given: A = 130°, c = 9, b = 12

4) Given: B = 75°, a = 20, c = 18

5) Given: a = 6, b = 8, c = 12

6) Given: a = 10, b = 15, C = 45°

7) Given: A = 30°, B = 60°, a = 50

8) If a triangular parcel of land has sides that measure 375 ft, 250 ft and 300 ft, what is the area of the parcel? If an acre is 43560 square feet, how many acres is this parcel?

9.) Given: c = 3.58, A = 38°, B = 69°

Trigonometry
Worksheet: Finding the area of a triangle

1) In what situation is it best to use the area formula, Area $= \frac{1}{2} bc \sin A$?
   a) When you are given SSA.
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   C

2) In what situation is it best to use the area formula, Area $= \sqrt{s(s-a)(s-b)(s-c)}$?
   a) When you are given SSA.
   b) When you are given ASA.
   c) When you are given SAS.
   d) When you are given SSS.

   D

In each of the following problems, you are given three measures for a triangle. The angle and side labels are based on the figure below, although the figure is not to scale. In each problem, find the area of that triangle.

3) Given: $A = 130°, c = 9, b = 12$ 41.4 units^2

4) Given: $B = 75°, a = 20, c = 18$ 173.9 units^2

5) Given: $a = 6, b = 8, c = 12$ 21.3 units^2

6) Given: $a = 10, b = 15, C = 45°$ 53.0 units^2

7) Given: $A = 30°, B = 60°, a = 50$

   2165.1 units^2

8) If a triangular parcel of land has sides that measure 375 ft, 250 ft and 300 ft, what is the area of the parcel? If an acre is 43560 square feet, how many acres is this parcel?

   $37,382.3 \text{ units}^2$

   It is not even 1 acre.

9) 3.9 units^2