Analysis CP- Chapter 5B

WS 5B.7- Which Law

For each triangle, (1) State the geometric theorem, (2) State which law (if any) could be used to solve the triangle, (3) Give the number of solutions and explain why. Do all work neatly on a separate sheet of paper.

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| --- | --- |
| 1.
2.
3.
4.
5.
6.
 | 1.
2.
3.
4.
5.
6.
 |

Select 5 (solvable) triangles from the above and give a complete solution.

1. One angle of a rhombus is 38°42’ and its sides are 4.836 in. long.

a) Find the length of the shorter diagonal.

b) Find the area of the rhombus.

1. The radius of a circle is 12 in. What is the measure of the central angle subtended by a chord 18 in. long?

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Analysis CP- Chapter 5B

WS 5B.X- Chapter 5B Review

For problems #1-6, assume angles A, B, and C are opposite sides a, b, and c in 

1. Given a = 5, b = 8, and C = 70°, find c.
2. Given c = 4, a = 6, and A = 50°, find C.
3. Given A = 31°20’, C = 65°50’ and c = 6, find b.
4. Given b = 6, a = 5.5, and A = 64°, find the area of .
5. Given c = 6, B = 61°40’, and A = 92°30’, find the area of .
6. Determine the number of triangles that exists and state the reason why. Then solve the triangle. If no triangle exists, give the reason why not.

a) B = 40°, b = 30, c = 20 b) B = 140°, c = 30, b = 20

c) C = 55°10’, b = 480, c = 428 d) A = 60°, a = 1.5, b = 2

e) A = 30°, B= 60°, C = 90° f) a = 10, b = 4, c = 5

1. The measures of the sides of are in the ratio of 15:13:7. Find the measure of the largest angle.
2. A triangular plot of ground has two sides 185’ and 147’ which intersect at an angle of 51°10’. Find the length of the third side and the area of the plot.
3. Three circles with radii of 115 ft, 150 ft, and 225 ft. are tangent to each other. Draw the triangle formed by their centers. Find the measure of the three angles and the area of the triangle.
4. A plane flying due east at 100 m/s is also being blown due south at 40 m/s by a strong wind. Find the speed and bearing of the plane (Bearing is measured from North, going clockwise).
5. In Washington D.C. the Lincoln Reflecting Pool is due west of the Washington Monument. A tourist at the top of the Washington Monument sites the front edge of the Pool at an angle of depression of 27° and sites the far edge of the pool at an angle of depression of 10°. If the Pool is 2030 feet long, about how high is the Washington Monument?