

Chapter 9 Review #2 Math Analysis I Honors

SOLVE ALL ANGLES TO THE NEAREST TENTH OF A DEGREE AND SIDE LENGTHS TO THREE SIGNIFICANT DIGITS.

1) In triangle ABC with $C = 90^\circ$, solve the triangle for all missing parts if $a = 25$ and $b = 45$.

2) A ladder 20 feet long leans against the side of a building and the angle between the ladder and the building is 22 degrees.

a) Find the distance from the bottom of the ladder to the building.

b) If the distance from the bottom of the ladder to the building is increased by 3 feet, find how far the top of the ladder moves down the building.

3) In triangle ABC, $b = 281$, $c = 358$, and $A = 43.3^\circ$. Find the area K.

4) Solve the triangle ABC if $A=61^\circ$, $B=42^\circ$, $c=15$

5) Tell how many solutions exist for the following data, (0, 1, or 2) and solve the triangle.

a) $C=17^\circ$, $a=10$, $c=11$

b) $A=20^\circ$, $a=15$, $b=9$

c) $C=30^\circ$, $b=10$, $c=4$

6) Find c in triangle ABC if $a=6$, $b=8$, $C=35^\circ$

7) Two jet aircrafts leave an airport at the same time. The course of the first is 160° while the course of the second is 290° . If the first travels 500 mph and the second 600 mph,

a) What is the distance between them at the end of 3 hours?

b) What course would the first plane travel to reach the second plane in this instance?

NAVIGATION REVIEW

Date _____

1) A plane flies 600 km on a course of 300° . It then flies South for a while and finally flies on a 40° course to return to its starting point. Find the total distance traveled.

2) After leaving an airport, a plane flies 1.5 hours at a speed of 200km/h on a course of 200° . Then, on a course of 340° , the plane flies for 2h at a speed of 250 km/h.

a) At this time, how far from the airport is the plane?

b) What course must the plane travel on to return to the airport?

3) Town T is 8 km Northeast of village V. City C is 4 km from T on a course of 150° from T. What is the distance between the city and the village?