

WORK DAY



Homework Questions

HW: WB p 105 all

Values/Theta Quiz tomorrow

optional quiz review

WB p 101 (evens - top of page)

Aug 29-6:38 AM

GO COUGARS!

p 337 Homework Questions

In Exercises 1-16, solve the right triangle shown in the figure.

1. $A = 30^\circ, b = 10$ 2. $B = 40^\circ, c = 15$
 3. $B = 75^\circ, b = 14$ 4. $A = 74^\circ, c = 20.5$
 5. $A = 6^\circ, b = 12$ 6. $a = 25, c = 45$
 7. $b = 16, c = 74$ 8. $B = 13.2^\circ, c = 14.9$
 9. $A = 12^\circ 15', c = 493.3$ 10. $B = 43^\circ 12', a = 145.5$

In Exercises 17-18, find the altitude of the isosceles triangle shown in the figure.

17. $a = 52^\circ, b = 8$ inches
 18. $a = 14^\circ, b = 13$ inches
 19. $A = 41^\circ, b = 18.5$ km
 20. $A = 72.50^\circ, c = 2.36$ kilometers

25. **Angle of Elevation** An engineer erects a 75-foot vertical pole from the ground. Find the angle of elevation to the top of the pole from a point on level ground 90 feet from the base.

29. **Angle of Depression** When an airplane banks for landing, its angle of climb is 18° and its speed is 275 feet per second. Find the plane's altitude after 1 minute.

30. **Angle of Depression** How long will it take the plane in Exercise 29 to climb to an altitude of 10,000 feet (to the nearest foot)?

31. **Missile's Altitude** A jet on the runway at the top of a mountain indicates that at the base of a hill the angle is 3.0° (see figure). Find the change in elevation of a car descending the runway.

35. **Navigation** A ship leaves port of origin and has a bearing of 25° W. The ship sails 20 hours. How many nautical miles will the ship have traveled from its point of departure?

36. **Navigation** An airplane flying at 400 miles per hour has a bearing of 25° . After flying for 3 hours, how far away has the plane from its point of departure?

39. **Location of a Ship** From the towers on the island of Guam, which is 40 miles from the shore, a ship is sighted from the towers and the bearings from the island are 14° W and 14° E, respectively (see figure). Find the distance of the ship from the nearest shore.

41. **Navigation** A ship is 45 miles east and 30 miles south of port. The captain wants to sail directly to port. What bearing should he take?

42. **Observer** An observer in a lighthouse 150 feet above sea level observes two ships directly offshore. The angle of depression to the ship west of and closer to the lighthouse is 30° and the angle of depression to the other ship is 45° . How far apart are the ships?

43. **Navigation** A ship is 100 miles east and 50 miles south of port. The captain wants to sail directly to port. What bearing should he take?

44. **Angle of Elevation** The top of a 150-foot obelisk casts a shadow 100 feet long and is measured on a 45-degree inclined wall. The shadow is cast by the top of the obelisk to the base of the wall. The shadow runs of parking is 150 feet from the base of the wall.

45. Find the angle of elevation to the top of the tower from the ground level and the distance from the ground level to the top of the tower.

46. Find the angle of elevation to the top of the tower from the ground level and the distance from the ground level to the top of the tower.

47. Find the angle of elevation to the top of the tower from the ground level and the distance from the ground level to the top of the tower.

Feb 2-9:51 PM

Right Triangle Trig Word Problem Worksheet Answer Key

1. 3290.53 ft.
2. height of deck 52.35 ft.
3. car at furthest distance 373.21 ft.
car at closer distance 153.99 ft.
distance traveled 219.22 ft.
4. distance from port to ship 84.85 knots
bearing 140 degrees
5. distance from port to ship 178.88 knots
bearing 128.43 degrees
6. 3185.92 ft.
7. 3136.38 ft.
8. 637.85 ft.

Jan 28-6:11 AM