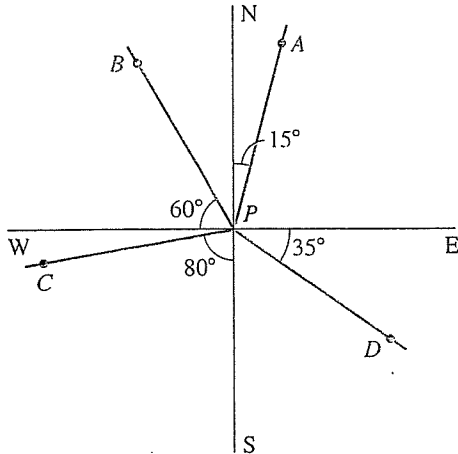


Geometry (H)
Section 8.7 – Trig Application Problems

Name: _____

1. Find the bearing from P to A, B, C and D.





2. A ship leaves port at noon and has a bearing of $S 29^\circ W$. If the ship sails at 20 knots, how many nautical miles south and how many nautical miles west will the ship have traveled by 6 p.m?

3. Two towers are 20 miles apart, tower A being due North of tower B. A fire is spotted from the towers, and its bearing from tower A and tower B are $S 56^\circ E$ and $N 34^\circ E$, respectively. How far is the fire from tower B? From tower A?



BEARING WORKSHEET

1. A ship steams 100 miles east, and then S 60 E for 40 miles. How far is the ship from its starting point ? What is its bearing from its starting point to its ending point?

- 
-
2. A plane flies from the County Airport on a bearing of N 45 E for three hours, and then flies on a bearing of S 45 E for four hours. If the speed of the plane is 400 mph, and we ignore the effects of wind, what is the plane's distance and bearing from the County Airport after the seven hours?
- 

3. Ship A is 485 meters due east of Ship B. A lighthouse 1600 meters from ship B is at a bearing N 17 W from ship B. What is the bearing of the lighthouse from ship A?

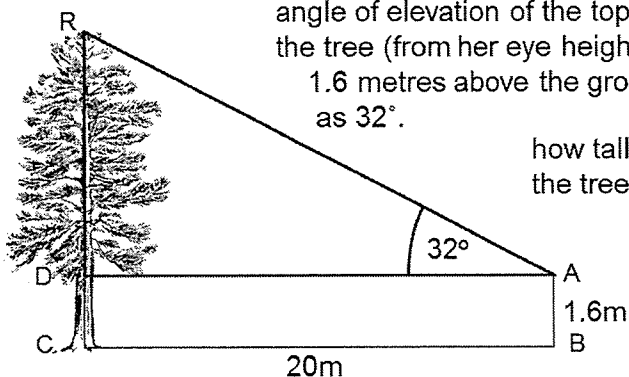
PHOEBE USES TRIG RATIOS

①

Phoebe stands on level ground, at B, 20 metres away from the foot C of a tree (CDR)

she whips out her handy pocket clinometer and measures the angle of elevation of the top of the tree (from her eye height of 1.6 metres above the ground) as 32° .

how tall is the tree?

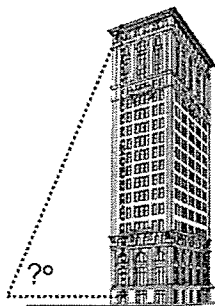


②

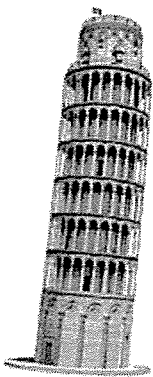
Phoebe still stands on level ground, a distance away from the foot of a building known to be 174.6m high

what will the angle of elevation be from a distance of:

- (a) 50 metres away
- (b) 100metres away ?



3



Phoebe drops her pocket clinometer off the top of the leaning tower of Pisa

it falls to the ground, 3m from the base of the tower

the tower was then leaning at an angle of 87.1° to the ground.

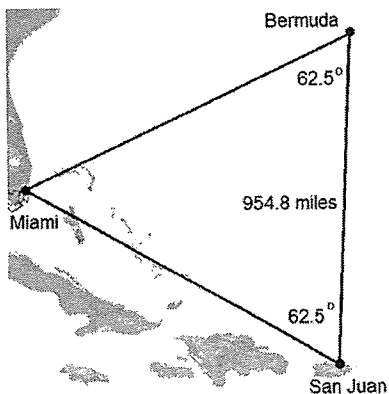
how far did it fall?

4

the 'Bermuda triangle' (not recognised in any official way) is claimed to be 500,000 square miles in area

it is an isosceles triangle with base angles as shown

how far out is the area claim?



triangle joining Miami, San Juan in Puerto Rico and Hamilton, Bermuda