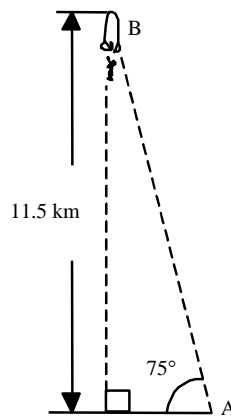


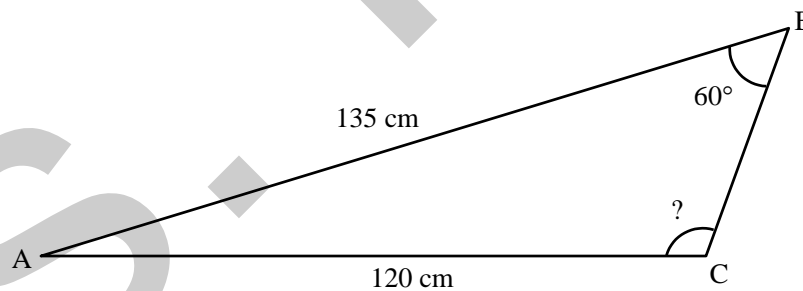
2. At the moment when it is announced that the space shuttle is at a height of 11.5 km, the angle of elevation is 75° at observation point A.



What is the distance between the space shuttle B and the point of observation A? (to the nearest km)

- A) 3 km
- B) 12 km
- C) 13 km
- D) 44 km

3. Consider triangle ABC below.

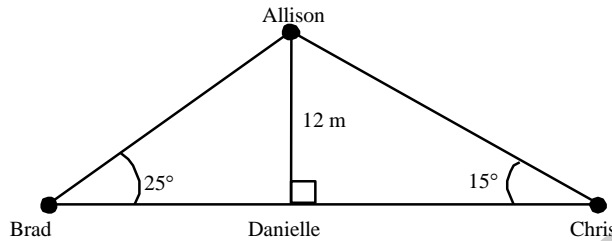


What is the measure of obtuse angle ACB to the nearest degree?

- A) 93°
- B) 103°
- C) 113°
- D) 153°

B – Short Answer – write your answer in the space provided (4 points)

4. Allison, Brad, Chris and Danielle are picking strawberries in a large field. Their positions are shown in the diagram below.

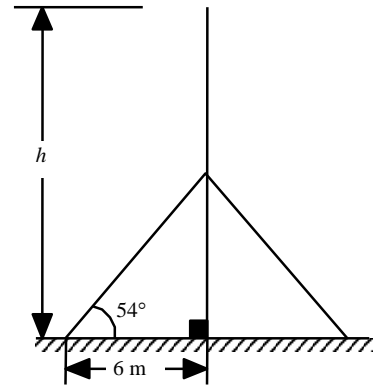


How far apart, to the nearest metre, are Brad and Chris?

The distance between Brad and Chris is _____ m.

5. A mast is supported at the midpoint by two cables. The cables are anchored 6 m from the foot of the mast.

The angle of elevation from the ground to the points of attachment of these cables is 54° .



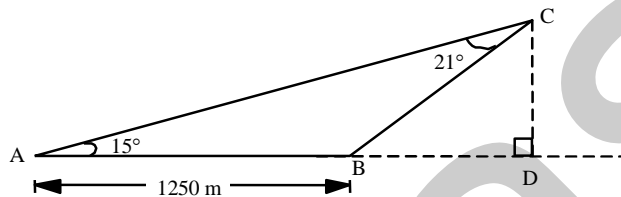
To the nearest tenth of a metre, what is height h of the mast?

Show your work.

C – Extended Answer – SHOW ALL YOUR WORK/EXPLAIN YOUR REASONING
(5 points each)

6. An engineer is planning to work with the data and diagram shown below to install a new lift at a ski resort.

Point A represents the point where skiers board.
Point B represents the bottom of the slope.
Point C represents the point where skiers get off.

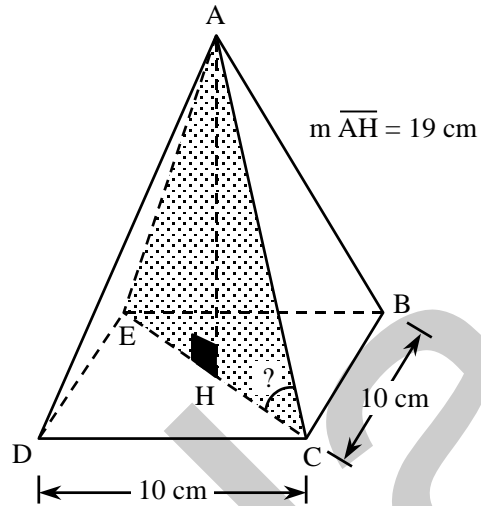


The distance between points A and B is 1250 m. Angle A measures 15° and angle ACB measures 21° . The engineer wants to find the vertical drop of slope \overline{CD} .

What is the length of segment CD to the nearest tenth of a metre?

Show your work.

7. A right pyramid with a square base is illustrated below. The edge of the base of this pyramid measures 10 cm. Triangle ACE is the face obtained by dividing this pyramid into two congruent parts. The height AH of this pyramid is 19 cm.



What is the measure of angle ACE to the nearest degree?

Show all your work.