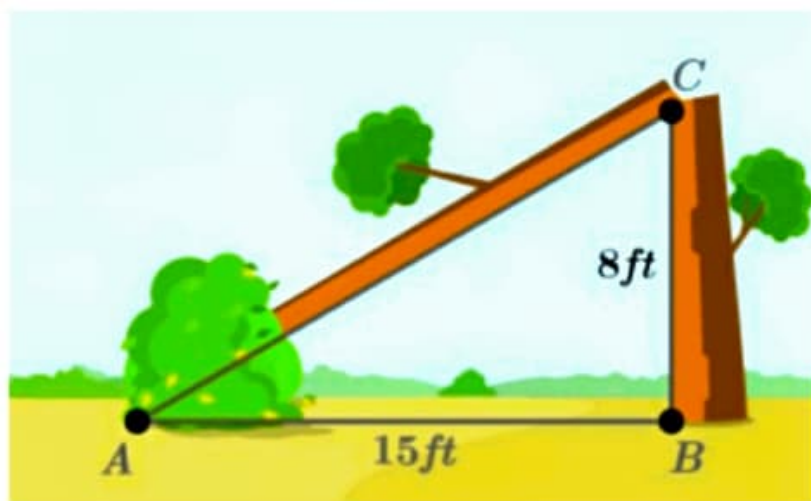


CASE STUDY:

Pari was at school. It was storming outside. After an hour when it was calm after the storm Pari was returning home. On her way home she has seen one tree has broken on the road. Pari has observed it is looking like a right-triangle. If the tree is broken at a height of 8 ft from the ground and its top touches the ground at a distance of 15 ft from the base of the tree then



- (a) What would be the length of the broken part of the tree?
- (b) What was the original height of the tree?
- (c) If the tree has broken at an angle of 60° at the point C then find $\angle BAC$.

HOT QUESTIONS

Q(1). Draw a triangle PQR whose median is RN.

Q(2). Draw a triangle XYZ whose two sides XZ and YZ are altitudes of the triangle.

Q(3). For a triangle ABC angle A= 50° , angle B= 70° and if you produce the side BC to D, then find angle ACD.

Q(4). Angle M= 53° and angle N= 37° of a triangle MNO.

Which of the following is true?

(a) $OM^2 + MN^2 = ON^2$

(b) $OM^2 - ON^2 = MN^2$

(c) $OM^2 + ON^2 = -MN^2$

(d) $OM^2 = MN^2 - ON^2$

(e) $OM^2 = ON^2 - MN^2$

(f) $ON^2 - MN^2 = OM^2$

Q(5). One of the exterior angle of a triangle is 110° and the interior opposite angles are in the ratio 5:6. Find the angles of the triangle.

Q(6). Find the diagonal of the rectangle whose length : breadth = 4:3 and its perimeter is 28 cm.

Q(7). The diagonals of a rhombus measure 42 cm and 40 cm. Find its perimeter.