Worksheet: Trigonometry 1
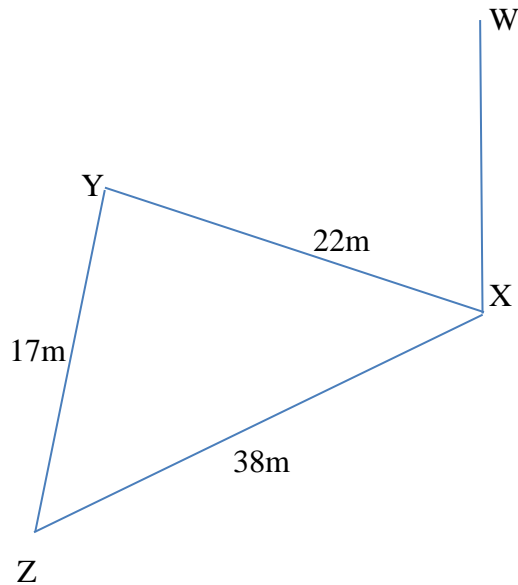
Name_____   Date_____

Answer ALL questions.

1. The diagram below, not drawn to scale, shows the position of three points, X, Yand X on a football field.

    Given that XY = 22 m, YZ = 17 m and XZ = 38 m.

    (a) Calculate:
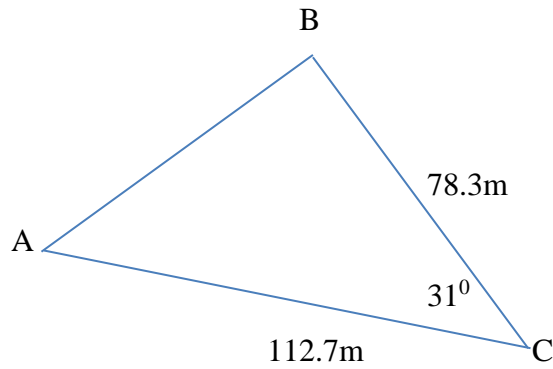
    (i)   Angle XZY;

(ii)   The area of triangle XYZ;

(b) WX represents the height of a lamp-post. If the angle of elevation of elevation of W
     from Z is 19^0:

(i)   Show the angle of elevation on a diagram of triangle WXZ;

(ii)   Calculate the height of the lamp-post WX.

2. The diagram below, not drawn to scale, shows the boundary points, A, B and C of a triangular garden on a horizontal plane.

Given that BC = 78.3 m , AC = 112.7 m and Angle ACB = 31^0.

B

78.3m

A

31^0

112.7m   C

(a) Calculate, correct to 1 decimal place, the distance AB;

(b) Calculate, correct to 1 decimal place, the area of triangle ABC;

(c) Find angle ABC, correct to three significant figures.