**Stage 1 General Mathematics Test – Trigonometry 1 (F)**

Unit: Trigonometry Total time: 45 minutes

 Total marks: 24 marks

1. ***Finding Sides and Angles (10 marks)***

|  |  |
| --- | --- |
| 1. Find the value of *x* in:
 | 1. Find the value of *θ* in:
 |

*x*

37.51 cm

11.8 m

46.8°

*θ*

34 cm

|  |  |
| --- | --- |
| 1. Find the value of *x* in:
 | 1. A rhombus has diagonals of lengths 60 mm and 28 mm respectively. Find the smaller angle of the rhombus.
 |

*x*

104°

11.4 cm

1. ***3-Dimensional Problem Solving (6 marks)***

A square based pyramid has base lengths 100 m and slant edges 120 m as shown:

(M is the centre of the square, and N is the midpoint of BC)

E

120 m

D

A

M

C

100 m

N

B

|  |
| --- |
| 1. Find the measure of angle ENM.
 |

|  |
| --- |
| 1. Find the measure of angle ECM.
 |

1. ***Problem Solving Using Trigonometry (4 marks)***

From a point A, 200 metres from the base of a building B, the angle of elevation to the top of the building C is 25°, and to the top of the flagpole D on top of the building is 28°. Find the height of the flagpole.

1. ***Problem Solving Using Trigonometry (4 marks)***

A boat is launched and travels 15 km south and 6km east of its original location. Find the distance and bearing from its launching position.