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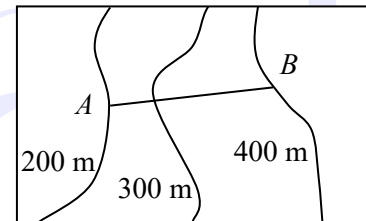
Revision of Applications in Trigonometry (I)

Exercises

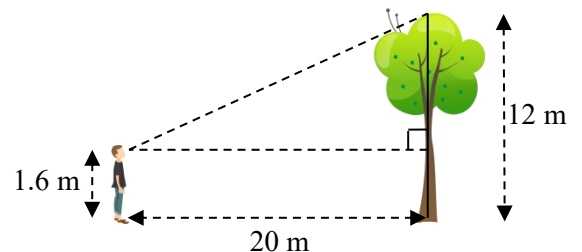
(In this exercise, unless otherwise specified, give the answer correct to 3 significant figures.)

- A man walks up a hill of gradient 1:8.
 - Find the inclination of the road, correct to the nearest 0.01° .
 - If he travels a horizontal distance of 500 m, find the vertical distance he travelled.

- The figure shows a map of the scale 1:10000. The length of AB is 4.5 cm on the map.
 - Find the gradient of AB in fraction.
 - Find the inclination of AB .
 - Find the actual distance of AB .



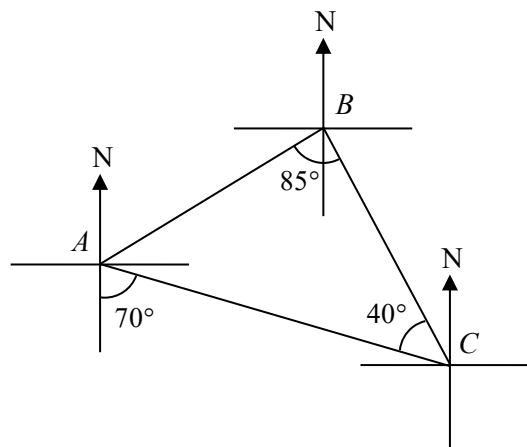
- Wayne's eye-level is 1.6 m above the ground. He is standing 20 m away from a tree. Find the angle of elevation of the top of a 12 m tall tree from his eye-level.



S3E-66A

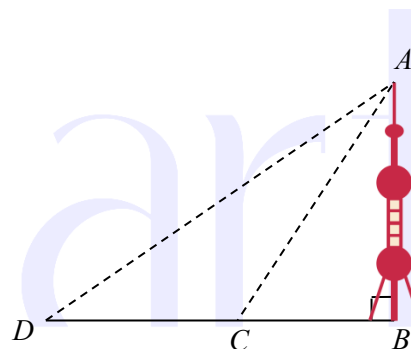
4. In the figure, A , B and C are on the same horizontal plane.

- (a) Find the true bearing of A from B .
- (b) Find the compass bearing of C from A .



5. In the figure, AB is a tower on the horizontal ground. C and D are two points on the ground such that B , C and D lie on a straight line. It is given that $AC = 280$ m, $AD = 360$ m and the angle of depression of C from A is 50° .

- (a) Find the height of the tower.
- (b) Find the angle of depression of D from A .
- (c) Find CD .



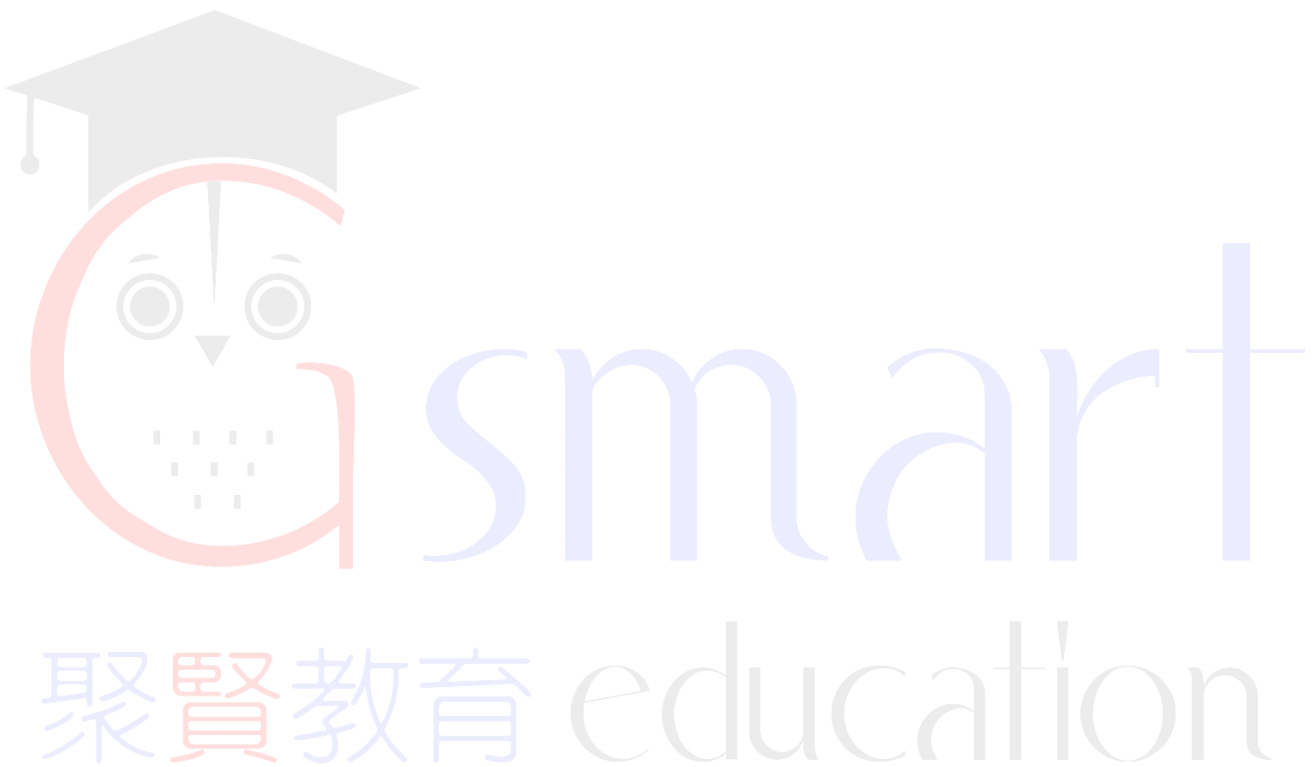
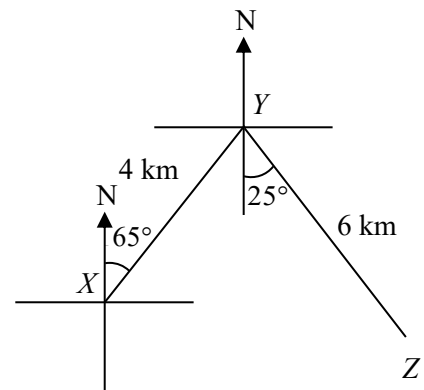
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6. John starts from place X and walks 4 km at a bearing of $N 65^\circ E$ to place Y . Then he walks 6 km at bearing of $S 25^\circ E$ to place Z .

(a) Find $\angle XYZ$.

(b) Find the distance between XZ .

(c) Find the true bearing of X from Z .

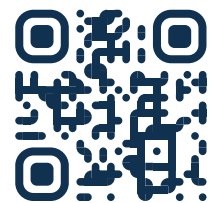
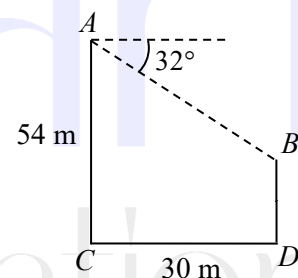


S3E-66A

M.C.

- The bearing of A from B is 165° . The bearing of B from A is
 - 015° .
 - 195° .
 - 255° .
 - 345° .
- Which of the following roads is the steepest?
 - A road of gradient $\frac{1}{3}$
 - A road of gradient 0.4
 - A road of gradient $2:1$
 - A road of inclination 25°
- The figure shows two buildings AC and BD . It is given that $AC = 54$ m, $CD = 30$ m and the angle of depression of B from A is 32° . Find BD , correct to 3 significant figures.

- 28.6 m
- 35.3 m
- 38.1 m
- 48.7 m



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