11. Diagram 5 shows five points plotted on a Cartersian plane.

Rajah 5 menunjukkan lima titik diplot di atas satah Cartesan.

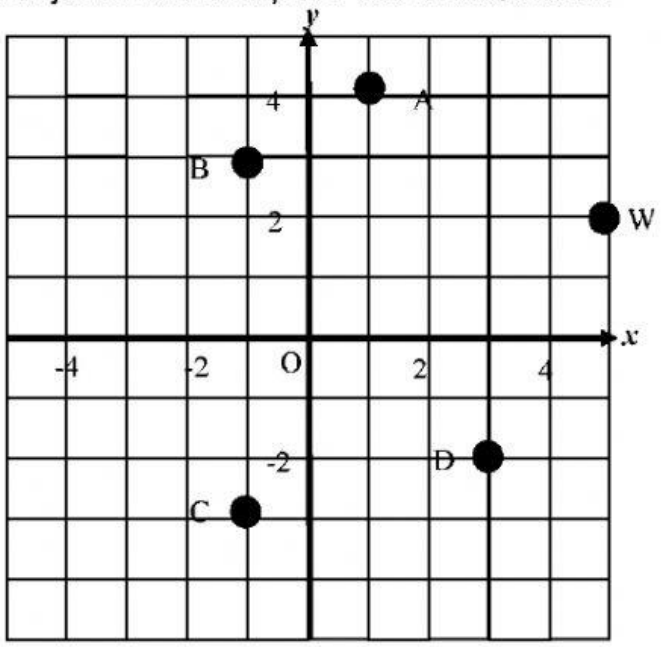


Diagram 5 / Rajah 5

Which of the point A, B, C or D, is image of point W under an anticlockwise rotation of 90° about the centre (2,1)?

Antara titik A, B, C dan D, yang manakah merupakan imej bagi titik W di bawah suatu putaran 90° lawan arah jam pada pusat (2,1)?

12. Given $\tan x = -\frac{5}{12}$ and $180° \leq x \leq 360°$. Find the sin x value.

Diberi $\tan x = -\frac{5}{12}$ *dan* $180° \leq x \leq 360°$. *Cari nilai sin x.*

A $-\frac{12}{13}$

B $\frac{5}{13}$

C $\frac{12}{13}$

D $-\frac{5}{13}$

13. Diagram 6 shows a pyramid with a horizontal rectangular base *PQRS*. Vertex T is vertically above P.

Rajah 6 menunjukkan sebuah piramid dengan tapak mengufuk segi empat tepat PQRS. Bucu T berada tegak di atas P.

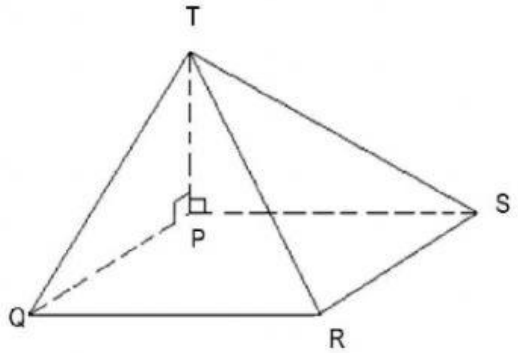


Diagram 6 / Rajah 6

Name the angle between the plane *PTQ* and the plane *PTS*.

Namakan sudut di antara satah P*TQ* dengan satah P*TS*.

A $\angle TQP$

B $\angle QTP$

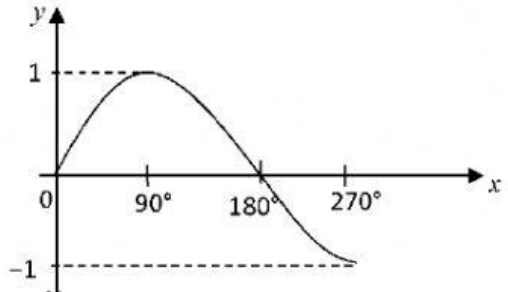
C $\angle QPT$

D $\angle QPS$

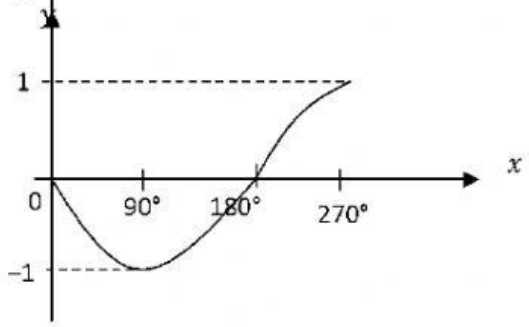
14. Which of the following represents the graph of y = sin x ° of $0° \leq x \leq 270°$?

Antara yang berikut, yang manakah mewakili graf y = sin x° bagi $0° \leq x \leq 270°$ *?*

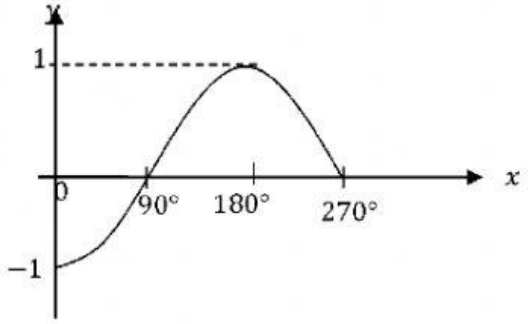
A



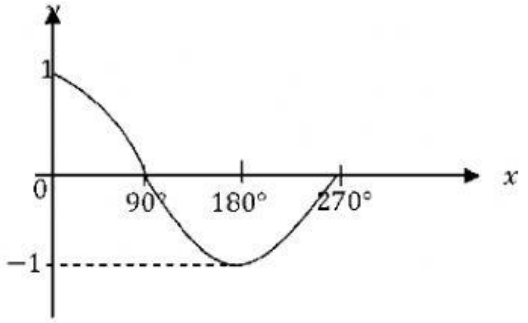
B



C



D



15.

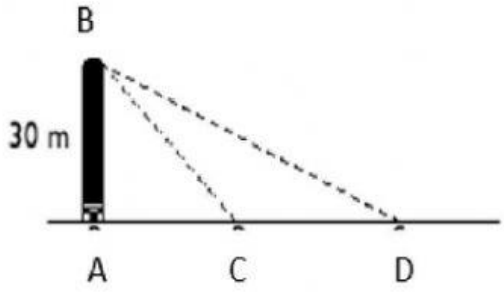


Diagram 7 / Rajah 7

Diagram 7 shows a building AB. The points A, C and D lie on a horizontal plane. C is the midpoint of AD. The angle of elevation of B from D is 30°.

Find the angle of depression of C from B.

Rajah 7 menunjukkan sebuah bangunan AB. Titik A, C dan D terletak di atas satah mengufuk. C ialah titik tengah bagi AD. Sudut dongakan B dari D ialah 30°.

Cari sudut tunduk C dari B.

A 32°12'

B 40°55'

C 49°5'

D 65°26'

16. Diagram 8 is the 'flying fox' cable, QS for delivering goods and landing place between two building blocks. The building worker has set the bow angle of landing from the top of the transmission terminal is 65°.

Rajah 8 ialah kabel 'flying fox', QS bagi menghantar barang dan tempat mendarat yang terdapat di antara dua blok bangunan. Pekerja bangunan telah menetapkan sudut tunduk tempat mendarat dari puncak terminal penghantaran ialah 65°.

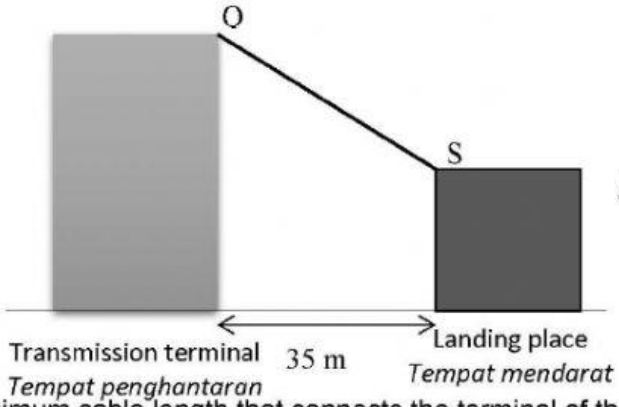


Diagram 8 / Rajah 8

Find the minimum cable length that connects the terminal of the transmission terminal to the landing place, in m.

Cari panjang minimum kabel yang menghubungkan puncak terminal penghantaran dengan tempat mendarat, dalam m.

A 35

B 73.8

C 82.8

D 75.1

17. Diagram 9 shows three points F, G and H, on a horizontal plane. H lies due north of G and bearing of F from H is 210°.

Rajah 9 menunjukkan tiga titik, F, G dan H yang terletak pada suatu satah mengufuk. H berada ke utara G dan bearing F dari H ialah 210°.

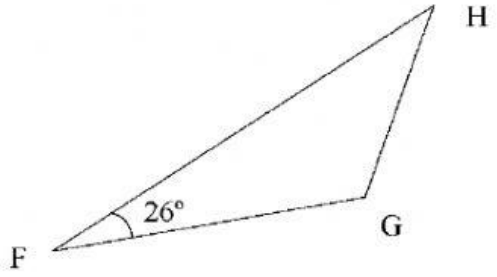


Diagram 9 / Rajah 9

Find the bearing of F from G.

Cari bearing F dari G.

A 056°

B 124°

C 210°

D 236°

18. $X(70°N, 110°W)$ and Y are two points on the earth's surface such that XY is the diameter of the parallel of latitude $70°N$. Calculate the shortest distance, in nautical mile, between X and Y.

$X(70°U, 110°S)$ dan Y ialah dua titik pada permukaan bumi dengan keadaan XY ialah diameter selarian latitud $70°U$. Hitung jarak terpendek, dalam batu nautika, di antara X dan Y.

A 2 400

B 3 694

C 8 400

D 10 800

19. Express $\frac{2}{m^2-m} - \frac{3}{m}$ as a single fraction in its simplest form.

Ungkapkan $\frac{2}{m^2-m} - \frac{3}{m}$ *sebagai satu pecahan tunggal dalam bentuk termudah.*

A $\frac{2-3(m-1)}{m(m-1)}$

B $\frac{-1-4m}{m(m-1)}$

C $\frac{5+3m}{m(m-1)}$

D $\frac{5-3m}{m(m-1)}$

20. Simplify:

Ringkaskan:

$$\frac{x}{y^3(x+2y)} \times (2y^2 + xy)$$

A $\frac{x}{y}$

B $\frac{x}{y^2}$

C $\frac{2x}{y^3}$

D $\frac{2x}{y^4}$