

Answer all questions.

- 1 Round off 48 008 correct to four significant figures.
[Bundarkan 48 008 kepada empat angka bererti .]
- A 48 00
B 48 01
C 48 000
D 48 010
- 2 Express 5.72×10^{-3} as a single number .
[Ungkapkan 5.72×10^{-3} sebagai satu nombor tunggal .]
- A 0.000572
B 0.00572
C 0.0572
D 0.572
- 3 Calculate $\frac{3.399 \times 10^2}{40000}$ and express the answer in standard form.
[Hitungkan $\frac{3.399 \times 10^2}{40000}$ dan ungkapkan jawapan dalam bentuk piawai .]
- A 8.5×10^{-1}
B 8.5×10^{-2}
C 8.5×10^{-3}
D 8.5×10^{-4}
- 4 The population of town D is 7.8×10^5 and the population of town Z is 5.3×10^4 .
The difference in population between the two towns is
[Populasi Bandar D ialah 7.8×10^5 dan populasi Bandar Z ialah 5.3×10^4 .
Perbezaan populasi di antara dua bandar itu ialah]
- A 2.5×10^4
B 2.5×10^5
C 7.27×10^4
D 7.27×10^5
- 5 What is the value of the digit 2 , in base ten, in the number 124_8 ?
[Apakah nilai bagi digit 2, dalam asas sepuluh, dalam nombor 124_8 ?]
- A 8
B 16
C 20
D 32
- 6 $11011_2 + 1001_2 =$
- A 100100_2
B 101101_2
C 100010_2
D 101010_2

- 7 Diagram 1 shows a pentagon $ABCDE$. Lines AB and FED are parallel.

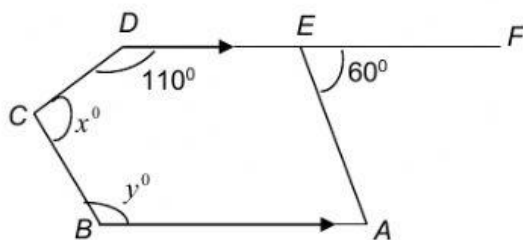


Diagram 1 [Rajah 1]

Find the value of $x + y$.

[Rajah 1 menunjukkan pentagon $ABCDE$. Garis lurus AB adalah selari dengan FED . Carikan nilai $x + y$.]

- A 216°
- B 222°
- C 250°
- D 260°

- 8 In Diagram 2, the tangent PQR touches the circle at Q ,

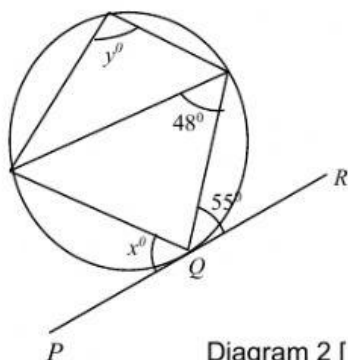


Diagram 2 [Rajah 2]

Find the value of $y - x$

[Dalam Rajah 2 , tangent PQR menyentuh bulatan pada Q . Carikan nilai $y - x$]

- A 48°
- B 55°
- C 77°
- D 103°

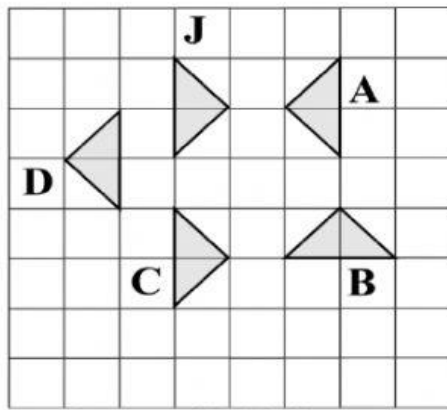


Diagram 3 [Rajah 3]

Diagram 3 shows five triangles drawn on a square grid. Which of the figures **A**, **B**, **C** or **D** is **not** the image of **J** under reflection?

[Rajah 3 menunjukkan lima segitiga dilukis pada grid segiempat sama. Antara segitiga **A**, **B**, **C** dan **D** yang manakah **bukan** imej bagi segitiga **J** di bawah satu pantulan?]

- 10 In Diagram 4, M' is the image of M under a certain translation. T' is the image of T under the same translation.

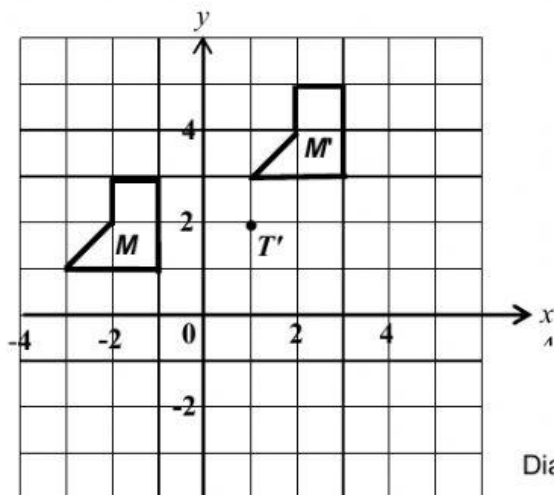


Diagram 4 [Rajah 4]

The coordinates of T is

[Dalam Rajah 4, M' adalah imej bagi M di bawah satu translasi. T' adalah imej bagi T di bawah translasi yang sama. Koordinat bagi T ialah]

- A (-3, 0)
- B (0, -3)
- C (5, 4)
- D (5, 0)

- 11 In Diagram 5, ABC is a right angled triangle. H is the midpoint of AB .

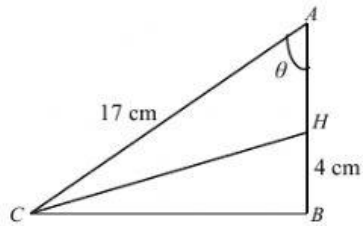


Diagram 5 [Rajah 5]

Find the value of $\tan \theta$

[Dalam Rajah 5, ABC ialah sebuah segitiga sudut tegak. H ialah titik tengah AB . Carikan nilai bagi $\tan \theta$]

- A $\frac{17}{15}$
- B $\frac{15}{17}$
- C $\frac{15}{8}$
- D $\frac{8}{15}$

- 12 In Diagram 6, KLM is a straight line. It is given that $\cos \angle NKL = \frac{5}{13}$.

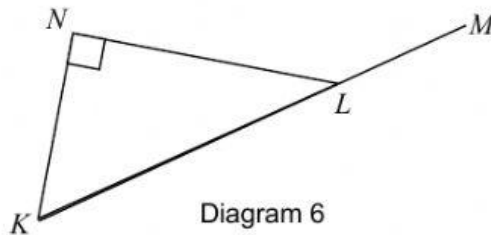


Diagram 6

Find the value of $\cos \angle NLM$.

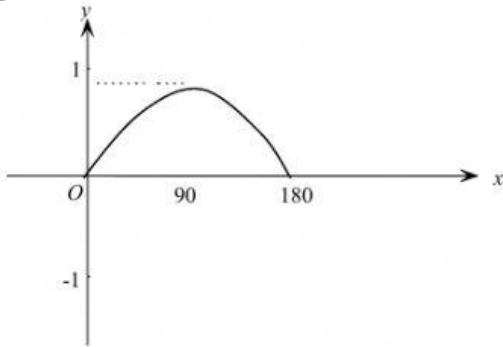
[Dalam Rajah 6, KLM ialah garis lurus. Diberi $\cos \angle NKL = \frac{5}{13}$.

Hitungkan kos $\angle NLM$.]

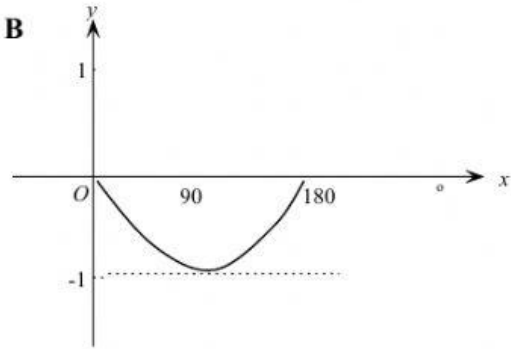
- A $-\frac{5}{12}$
- B $-\frac{12}{13}$
- C $\frac{5}{12}$
- D $\frac{12}{13}$

- 13 Which of the following represents the graph $y = \sin x$ for $0^\circ \leq x \leq 180^\circ$?
Antara yang berikut, yang manakah mewakili graf $y = \sin x$ bagi $0^\circ \leq x \leq 180^\circ$?

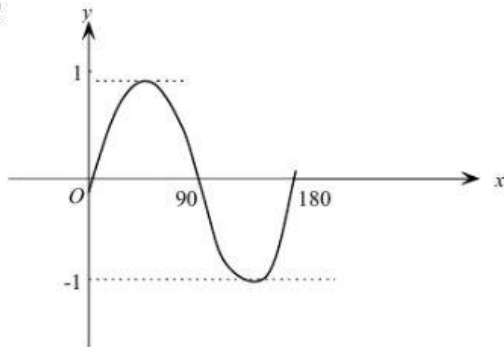
A



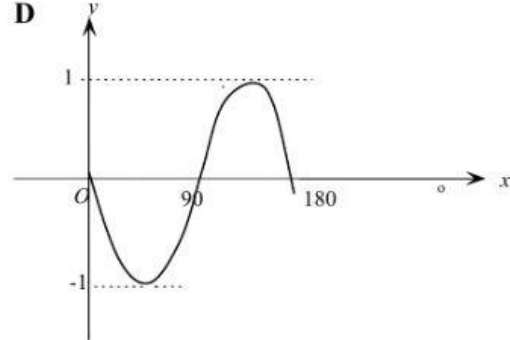
B



C



D



- 14 Diagram 7 shows a cuboid with a horizontal base $PQTS$. Name the angle between the plane TWQ and the plane $RTQU$.

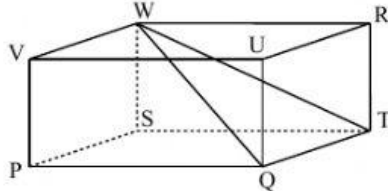


Diagram 7 [Rajah 7]

[Rajah 7 menunjukkan sebuah kuboid dengan satah mengufuk $PQTS$.
Namakan sudut di antara satah TWQ dengan satah $RTQU$]

- A. $\angle RWT$
- B. $\angle RWQ$
- C. $\angle RTQ$
- D. $\angle RTW$

- 15 In Diagram 8, RT and AF are two vertical poles on a horizontal plane. S is a point on RT such that $ST = AF$

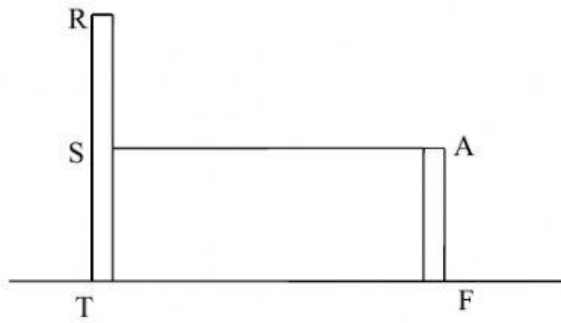


Diagram 8 [Rajah 8]

The angle of elevation of point R from point A is

[Dalam Rajah 8, RT dan AF adalah dua batang tiang tegak pada satah mengufuk. S adalah satu titik di atas RT dengan keadaan $ST = AF$. Sudut dongak titik R dari titik A ialah]

- A $\angle ARS$
- B $\angle SAR$
- C $\angle TFR$
- D $\angle TAF$

- 16 In Diagram 9, SQ and TP are two vertical poles on a horizontal plane.

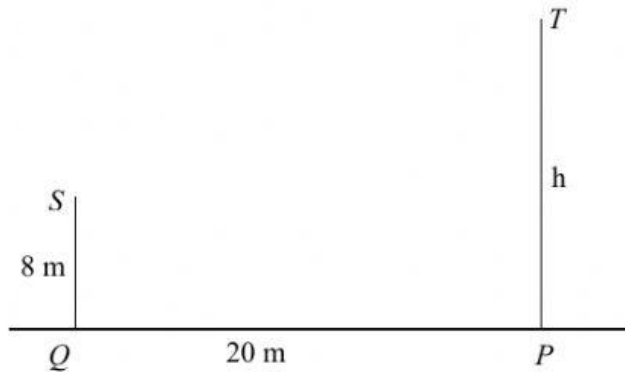


Diagram 9 [Rajah 9]

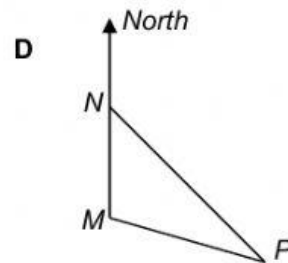
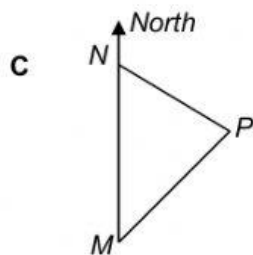
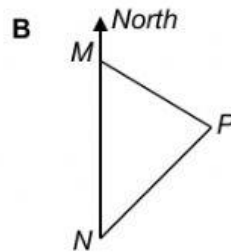
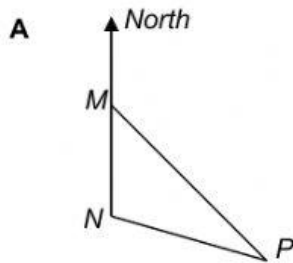
The angle of depression of S from T is 42° . Calculate the value of h , in m.

[Dalam Rajah 9, SQ dan TP adalah dua tiang tegak di atas satah mengufuk. Sudut tunduk puncak S dari T ialah 42° . Hitungkan nilai h , dalam m]

- A 18.0
- B 22.2
- C 26.0
- D 30.2

- 17 M , N and P are three points on a horizontal plane. N is due south of M . The bearing of P from M is 150° and the bearing of N from P is 230° . Which of the following diagrams shows the position of M , N and P ?

[M , N dan P ialah tiga titik pada satah mengufuk. N berada di selatan M . Bearing P dari M ialah 150° dan bearing N dari P ialah 230° . Antara rajah berikut, yang manakah menunjukkan kedudukan M , N , dan P ?]



- 18 P (77° N, 35° E) and S are two points on the surface of the earth with PS as the diameter of the earth. The position of S is

[P (77° U, 35° T) dan S adalah dua titik di atas permukaan bumi dengan keadaan PS ialah diameter bumi. Kedudukan bagi S ialah]

- A** (77° S, 145° W)
B (77° S, 35° E)
C (77° N, 145° W)
D (77° N, 35° E)

- 19 $x(x - 2y) - (x - y)^2 =$

- A** y^2
B $-y^2$
C $y^2 - 4xy$
D $y^2 - 2xy$

20 Simplify $(4k^2 + 2kr) \times \frac{r}{k^2(r + 2k)}$

A $\frac{2r}{k}$

B $\frac{2k}{r}$

C $\frac{k^2}{r}$

D $4r$

21 Given that $\frac{5m - 3n}{4} = n + mn$, express m in terms of n .

[Diberi $\frac{5m - 3n}{4} = n + mn$, ungkapkan m dalam sebutan n .]

A $\frac{7n}{5 - 4n}$

B $\frac{7n}{4n - 5}$

C $\frac{n}{5 - 4n}$

D $\frac{n}{4n - 5}$

22 Given that $\frac{7}{3} - 5k = -2(3 - k)$, then $k =$

[Diberi $\frac{7}{3} - 5k = -2(3 - k)$, maka $k =$]

A $\frac{25}{3}$

B $\frac{25}{7}$

C $\frac{25}{9}$

D $\frac{25}{21}$

23 Simplify $\left[\frac{9^2 \times 5^{\frac{1}{2}}}{15^2} \right]^2$

[Ringkaskan $\left[\frac{9^2 \times 5^{\frac{1}{2}}}{15^2} \right]^2$]

A $3^4 \times 5^{-1}$

B $3^4 \times 5^{-3}$

C $3^6 \times 5^{-1}$

D $3^8 \times 5^{-3}$

- 24 List all the integers x which satisfy both the inequalities

$$\frac{x}{2} - 1 \leq x \quad \text{and} \quad \frac{1}{3}(x+4) > x$$

[Senaraikan semua integer x yang memuaskan kedua-dua ketaksamaan

$$\frac{x}{2} - 1 \leq x \quad \text{and} \quad \frac{1}{3}(x+4) > x]$$

- A -2, -1, 0, 1, 2
 B -2, -1, 0, 1
 C -1, 0, 1, 2
 D -1, 0, 1

- 25 Diagram 10 is a pictograph showing the number of tourists who visited Pangkor Island in March and April. The number of visitors in January and February are not shown.

January	
February	
March	       
April	   

 represents 2500 tourists

DIAGRAM 10

A total of 55000 tourists had visited Pangkor Island in those four months.
 The number of tourists in January was two third the number of tourists in February.
 The number of tourists in February was

[Rajah 10 ialah piktograf yang menunjukkan bilangan pelancung ke Pulau Pangkor dalam bulan Mac dan April. Bilangan pelancung dalam bulan Januari dan Februari tidak ditunjukkan.]
 Sejumlah 55000 pelancung telah melawat Pulau Pangkor dalam empat bulan itu. Bilangan pelancung dalam bulan Januari adalah dua pertiga bilangan pelancung dalam bulan Februari.
 Bilangan pelancung dalam bulan Februari ialah]

- A 10 000
 B 15 000
 C 20 000
 D 25 000