Jawab **semua** soalan.

Answer **all** *questions.*

1 Suatu nombor, n apabila dibundarkan betul kepada tiga angka bererti menjadi 4.30. Antara berikut, yang manakah nilai n yang mungkin?

A number, n is rounded off correct to three significant figures to be 4.30. *Which of the following is the possible value of n?*

A 4.291

B 4.295

C 4.305

D 4.309

2 Rajah 1 menunjukkan gambar Matahari yang berbentuk sfera.

Diagram 1 *shows the picture of the Sun in the shape of sphere.*

Rajah 1
Diagram 1

Menurut sumber Wikipedia, jejari Matahari ialah 696 342 km.

Hitung luas permukaan Matahari, dalam km^2. Nyatakan jawapan dalam bentuk piawai betul kepada tiga angka bererti.
(Gunakan $\pi = 3.142$)

According to Wikipedia, the radius of the Sun is 696 342 km.

Calculate the surface area, in km^2, *of the Sun. State the answer in standard form correct to three significant figures.*
(*Use* $\pi = 3.142$)

A 6.09×10^{-12}

B 6.094×10^{-12}

C 6.094×10^{12}

D 6.09×10^{12}

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LIVEWORKSHEETS

3 Kilang Roti Maju mengeluarkan 2.64 juta buku roti seminggu. Kilang itu beroperasi 7 hari seminggu dan 24 jam sehari.

Hitung keuntungan purata per jam jika untung bersih sebuku roti ialah 47 sen. Nyatakan jawapan dalam RM terdekat.

Kilang Roti Maju produces 2.64 *million loaves of bread a week. The factory operates* 7 *days a week and* 24 *hours a day.*

Calculate the average profit per hour if the net profit of one loaf of bread is 47 *cents. State the answer to the nearest* RM.

A RM7 358.00

B RM7 385.00

C RM7 386.00

D RM7 538.00

4 Nyatakan nilai digit 7 dalam nombor 20761_9 dalam asas sepuluh.

State the value of the digit 7 *in the number* 20761_9 *in base ten.*

A 63

B 70

C 567

D 700

5 Diberi bahawa $1110_3 < x_{10} < 60_7$.

Senaraikan semua integer bagi x.

Given that $1110_3 < x_{10} < 60_7$.

List down all the integers of x.

A 39, 40

B 40, 41

C 41, 42

D 42, 43

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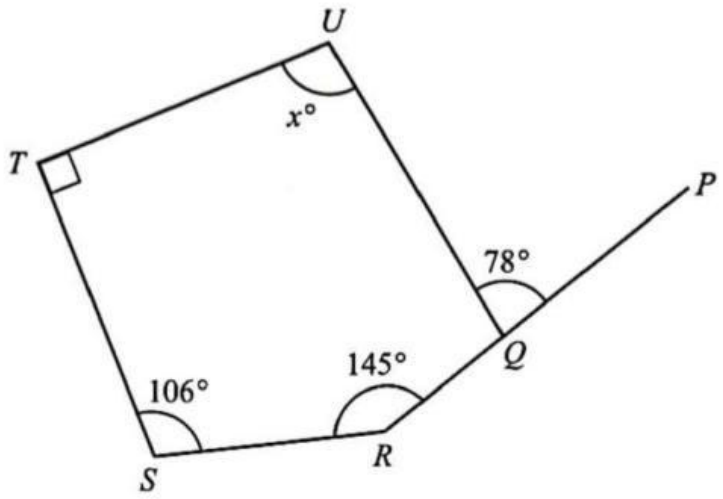
LIVEWORKSHEETS

6 Rajah 2 menunjukkan sebuah pentagon *QRSTU* dan *PQR* ialah garis lurus.
Diagram 2 shows a pentagon QRSTU and PQR is a straight line.



Rajah 2
Diagram 2

Cari nilai bagi *x*.
Find the value of x.

A 74

B 90

C 97

D 102

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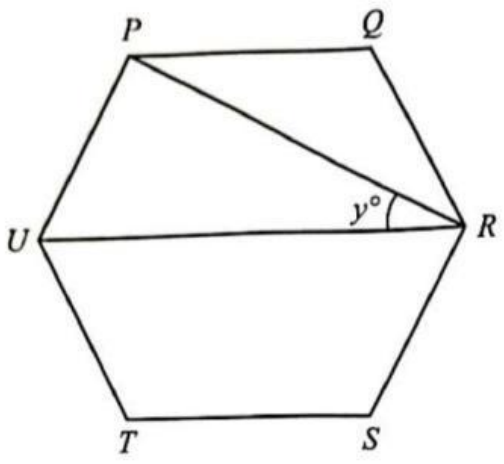
LIVEWORKSHEETS

7 Rajah 3 menunjukkan heksagon sekata *PQRSTU*.
Diagram 3 shows a regular hexagon PQRSTU.



Rajah 3
Diagram 3

Cari nilai bagi *y*.
Find the value of y.

A 60
B 45
C 30
D 15

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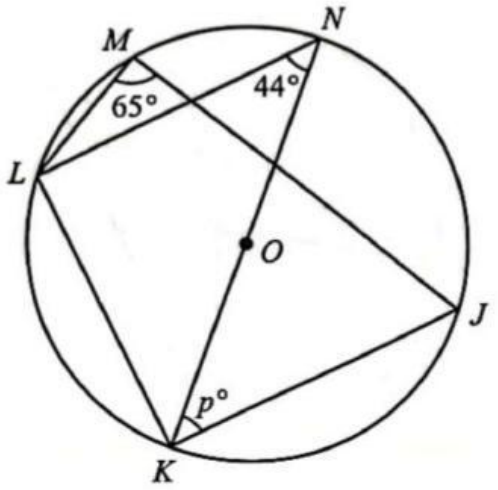
8 Rajah 4 menunjukkan sebuah bulatan berpusat di *O*. *KON* ialah diameter bulatan itu.
Diagram 4 shows a circle with centre O. KON is a diameter of the circle.



Rajah 4
Diagram 4

Cari nilai bagi *p*.
Find the value of p.

A 25
B 44
C 46
D 69

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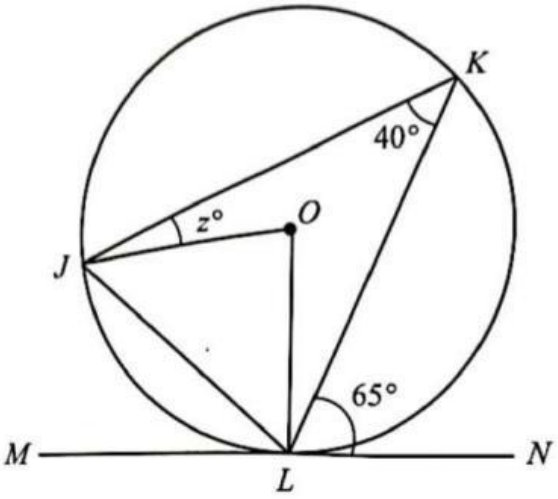
9 Dalam Rajah 5, *MLN* ialah tangen kepada bulatan *JKL* di titik *L*.
In Diagram 5, MLN is a tangent to the circle JKL at point L.



Rajah 5
Diagram 5

Cari nilai bagi *z*.
Find the value of z.

A 15
B 20
C 25
D 50

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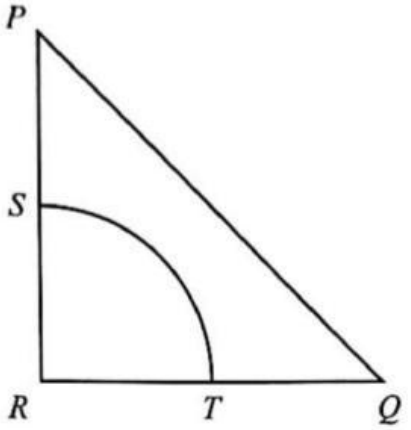
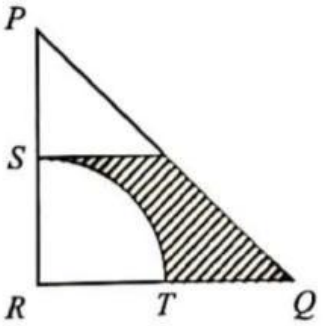
10 Rajah 6 menunjukkan segi tiga *PQR* dan sukuan bulatan *RST*.
Diagram 6 shows the triangle PQR and the quadrant of the circle RST.

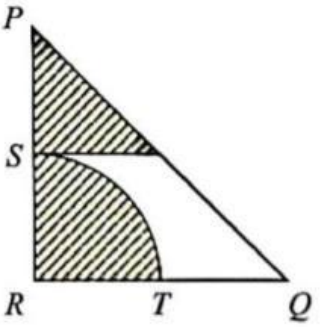


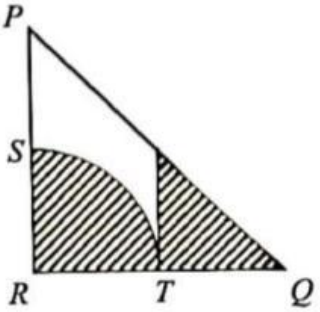
Rajah 6
Diagram 6

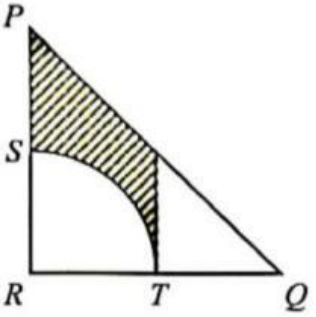
Diberi bahawa $PR = QR = 4$ cm. *S* dan *T* masing-masing adalah titik tengah bagi *PR* dan *RQ*. Antara kawasan berlorek berikut, yang manakah mewakili lokus titik *X* di dalam segi tiga *PQR* dengan keadaan *XR* lebih 2 cm atau sama dari titik *R* dan kurang 2 cm dari sisi *PR*?

Given that $PR = QR = 4$ cm. *S and T are the midpoints for PR and RQ respectively.*
Which of the following shaded areas represents the locus of point X in triangle PQR with XR more than 2 cm *or equal from point R and less than* 2 cm *from side PR?*

A


B


C


D


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11 Jadual 1 menunjukkan bilangan bola yang terdapat di dalam sebuah kotak.
Table 1 shows the number of balls in a box.

Warna *Colour*	Biru *Blue*	Kuning *Yellow*	Hijau *Green*
Bilangan *Number*	x	20	12

Jadual 1
Table 1

Hakimi mengambil sebiji bola secara rawak dari kotak tersebut. Kebarangkalian beliau mendapat bola berwarna hijau ialah $\frac{1}{4}$.
Hitung kebarangkalian Hakimi memilih bola **bukan** berwarna kuning.
Hakimi takes a ball randomly from the box. The probability of him getting a green ball is $\frac{1}{4}$.
Calculate the probability of Hakimi choosing the ball that is **not** *yellow.*

A $\frac{1}{3}$

B $\frac{5}{12}$

C $\frac{7}{12}$

D $\frac{3}{4}$

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LIVEWORKSHEETS

12 Encik Mikhael dan Puan Hazirah mempunyai 3 orang anak iaitu Izzul, Syasya dan Amer. Izzul berusia x tahun, Syasya berusia y tahun manakala Amer berusia 2 tahun lebih tua berbanding Syasya.

Antara ungkapan berikut, yang manakah mewakili jumlah umur bagi ketiga-tiga orang anak mereka?

Encik Mikhael and Puan Hazirah have 3 children, namely Izzul, Syasya and Amer. Izzul is x years old, Syasya is y years old while Amer is 2 years older than Syasya.

Which of the following expressions represents the total ages of their three children?

A $x + y - 2$

B $x + y + 2$

C $x + 2y + 2$

D $x + 2y - 2$

13 Nadia telah membuat sebiji kek coklat berbentuk segi empat tepat berukuran $(6x + 4)$ cm panjang dan $(2x + 4)$ cm lebar. Dia telah memotong kek coklat tersebut kepada 6 bahagian panjang dan 4 bahagian lebar.

Hitung luas permukaan atas sepotong kek coklat tersebut.

Nadia has bake a rectangular chocolate cake measuring $(6x + 4)$ cm *long and* $(2x + 4)$ cm *wide. She has cut the chocolate cake to 6 parts long and 4 parts wide.*

Calculate the top surface area of a piece of the chocolate cake.

A $\dfrac{3x^2 + 8x + 4}{6}$

B $\dfrac{2(3x^2 + 8x + 4)}{5}$

C $\dfrac{4(x^2 + 1)}{5}$

D $\dfrac{3x^2 + 4}{6}$

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LIVEWORKSHEETS

14 Seorang pengurus cawangan sebuah kedai pakaian dibayar gaji 3 kali ganda berbanding gaji pekerja sambilan, RMx per jam. Masa bekerja untuk pekerja sambilan tersebut ialah separuh daripada masa bekerja pengurus itu, y jam dalam tempoh sehari.

Jika mereka bekerja selama 26 hari dalam sebulan, ungkapkan perbezaan gaji, RMz antara kedua-dua pekerja tersebut dalam sebutan x dan y.

A branch manager of a clothing store is paid a salary 3 times that of a part-time worker, RMx *per hour. The working time for the part-time worker is half of the manager's working time, y hours in the day.*

If they work for 26 days a month, express the difference in salary, RMz *between the two workers in terms of x and y.*

A $z = 91xy$

B $z = 65xy$

C $z = 52xy$

D $z = 26xy$

15 Diberi bahawa luas bagi bentuk P dan bentuk Q ialah 16 cm^2 dan 36 cm^2.

Jika bentuk Q ialah imej bagi bentuk P di bawah suatu pembesaran, tentukan faktor skala bagi pembesaran itu sekiranya kedudukan imej berada bertentangan dengan objek.

Given that the area for the shape P and shape Q is 16 cm^2 *and* 36 cm^2.

If the shape Q is the image for the shape P under an enlargement, determine the scale factor for the enlargement if the position of the image is on the opposite site of object.

A $\frac{9}{4}$

B $\frac{3}{2}$

C $-\frac{3}{2}$

D $-\frac{9}{4}$

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LIVEWORKSHEETS

16 Gopal menjalankan satu tinjauan mengenai hobi murid-murid tingkatan lima. Jadual 2 menunjukkan hasil tinjauan Gopal.
Diberi bilangan murid yang suka menyanyi adalah separuh daripada bilangan murid yang suka menari. Bilangan murid yang suka menari adalah $\frac{1}{3}$ daripada jumlah murid tingkatan lima.

Gopal conducted a survey on the hobbies of form five students. Table 2 shows the results of Gopal's survey.
Given the number of students who like to sing is half of the number of students who like to dance. The number of students who like to dance is $\frac{1}{3}$ of the total form five students.

Hobi ***Hobby***	**Bilangan murid** ***Number of students***
Menari *Dancing*	y
Membaca *Reading*	15
Berenang *Swimming*	45
Menyanyi *Singing*	x

Jadual 2
Table 2

Jika satu carta pai dilukis untuk mewakili maklumat yang diberi, hitung beza sudut sektor yang mewakili bilangan murid yang suka menari dan membaca.
If a pie chart is drawn to represent the given information, calculate the difference of the angle of the sectors which represent the number of students who like to dance and read.

A 45°

B 75°

C 120°

D 165°

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LIVEWORKSHEETS

17 Jadual 3 menunjukkan taburan skor sekumpulan murid dalam satu kuiz.

Table 3 shows the distribution of the scores of a group of students in a quiz.

Skor *Score*	4	5	6	7
Kekerapan longgokan ***Cumulative frequency***	$3x$	$4x + 4$	$4x + 10$	$4x + 16$

Jadual 3
Table 3

Diberi bahawa min bagi data tersebut ialah 5, tentukan skor mod.

Given that the mean for the data is 5, determine the score mode.

A 3

B 4

C 5

D 6

18 Jarak di antara bandar Ipoh dengan bandar Petaling Jaya di atas peta ialah 4.8 cm. Diberi skala yang digunakan pada peta ialah 1 cm : 50 km.

Jika Benjamin mula memandu keretanya dari bandar Ipoh pada jam 1050 dan tiba di bandar Petaling Jaya pada jam 1320, hitung laju purata kereta tersebut dalam km j^{-1}.

The distance between Ipoh town and Petaling Jaya town on map is 4.8 cm. *Given the scale used on the map is* 1 cm : 50 km.

If Benjamin starts driving his car from Ipoh town at 1050 *hours and reaches Petaling Jaya town at* 1320 *hours, calculate the average speed of the car in* km h^{-1}.

A 80

B 92

C 96

D 98

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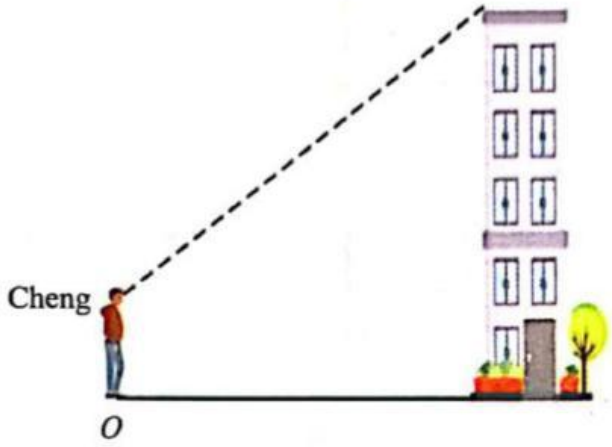
LIVEWORKSHEETS

19 Rajah 7 menunjukkan Cheng sedang memerhati puncak sebuah bangunan. Apabila dia berdiri di titik O, dia mendapati sudut dongakan puncak bangunan dari aras matanya ialah 35°. Kemudian, dia berjalan sejauh 3.5 m menuju ke arah bangunan itu dan mendapati bahawa sudut dongakan puncak bangunan menjadi 43°.

Diagram 7 shows Cheng is observing the top of the building. When he is standing at point O, he finds that the angle of elevation of the top of the building from his eye level is 35°. *He then walks* 3.5 m *towards the building and finds that the angle of elevation of the top of the building becomes* 43°.



Rajah 7
Diagram 7

Jika tinggi aras mata Cheng dari tanah mengufuk ialah 1.75 m, hitung tinggi, dalam m, bangunan itu.

If the height of Cheng's eye level from the horizontal ground is 1.75 m, *calculate the height, in* m, *of the building.*

A 4.8

B 6.5

C 9.8

D 11.6

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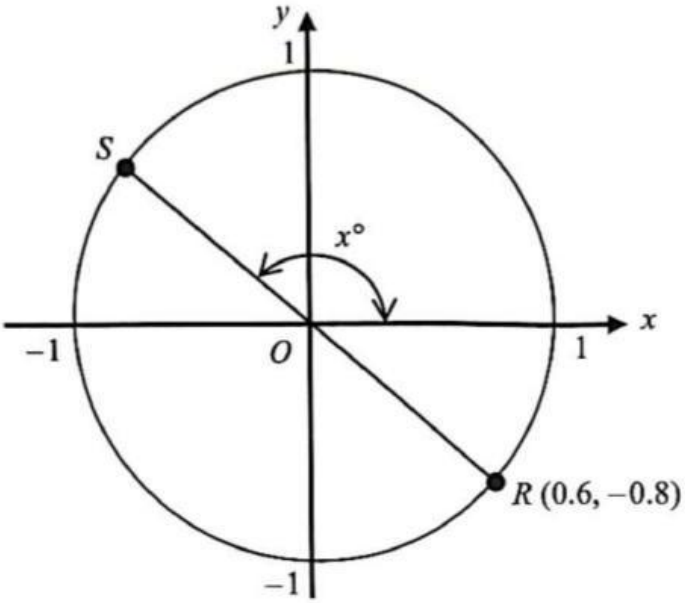
20 Dalam Rajah 8, *ROS* ialah diameter satu bulatan unit.
In Diagram 8, ROS is a diameter of a unit circle.



Rajah 8
Diagram 8

Cari nilai *x*.
Find the value of x.

A 126.87

B 141.34

C 143.13

D 149.04

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