

1. Bundarkan 4.072 betul kepada dua angka bererti.
Round off 4.072 correct to two significant figures.

A 4.0
B 4.1
C 4.07
D 4.08

2. $890120_3 =$

A $(8 \times 3^4) + (9 \times 3^3) + (1 \times 3^2) + (2 \times 3^1)$
B $(8 \times 3^4) + (9 \times 3^3) + (1 \times 3^1) + (2 \times 3^0)$
C $(8 \times 3^5) + (9 \times 3^4) + (1 \times 3^2) + (2 \times 3^1)$
D $(8 \times 3^5) + (9 \times 3^4) + (1 \times 3^1) + (2 \times 3^0)$

3. Yang manakah **bukan** satu pernyataan?

*Which of the following is **not** a statement?*

A $2^2 \times 2^3$
B $2^2 < 2^3$
C $2^2 + 2^3 = 2^6$
D $2^3 = 2 \times 2 \times 2$

4. Cari punca-punca persamaan kuadratik

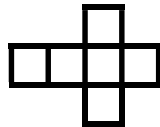
Find the roots of quadratic equation of

$$2x^2 + 4x = 16$$

A $x = -2, x = -4$
B $x = -2, x = 4$
C $x = 2, x = 4$
D $x = 2, x = -4$

5. Rajah menunjukkan bentangan sebuah kiub.

Diagram shows the net of a cube.



Diberi bahawa jumlah luas permukaan bentangan itu ialah 384 cm^2 . Hitung isi padu, dalam m^3 , bagi kiub itu.

It is given that the total area of the net is 384 cm^2 .

Calculate the volume, in m^3 , of the cube.

A 5.12×10^{-8}
B 5.12×10^{-4}
C 6.4×10^{-7}
D 6.4×10^{-5}

6. Diberi $11011_2 + k_2 = 101000_2$, cari nilai k .

Given $11011_2 + k_2 = 101000_2$, find the value of k .

A 1001_2
B 1011_2
C 1101_2
D 1110_2

7. $(-5)^2 + \sqrt{2\frac{7}{9}} - 2^3 =$

A -29.33
B 18.25
C 18.67
D 20.67

8. Nyatakan 59 dalam asas 5.

State 59 in base five.

A 214_5
B 412_5
C 213_5
D 312_5

9. $524_6 - 325_6 =$

A 51_6
B 133_6
C 155_6
D 213_6

10. Antara digit 3 dalam nombor berikut, yang manakah nilainya paling besar?

Which of the following number has a digit 3 with the largest value?

A 341_7
B 231_7
C 316_8
D 436_8

11. Diberi $24_m + 12_m = 36_m$, cari nilai m yang **tidak** mungkin.

*Given $24_m + 12_m = 36_m$, find the **impossible** value of m .*

A 6
B 7
C 8
D 9

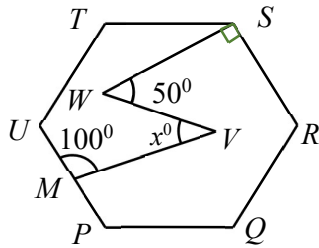
12. Faktorkan/ Factorise $12x^2 + 2x - 4$.

A $(2x + 1)(3x - 2)$
B $(2x - 1)(3x + 2)$
C $2(2x + 1)(3x - 2)$
D $2(2x - 1)(3x + 2)$

13. $(p - q)(p + q) - (p + q)^2 =$

A $-2q^2$
B $2pq$
C $2pq - 2q^2$
D $-2pq - 2q^2$

14. Dalam Rajah, $PQRSTU$ ialah heksagon sekata.
In Diagram, $PQRSTU$ is a regular hexagon.

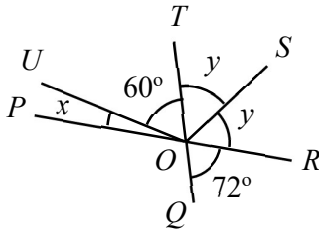


Find the value of x

Cari nilai x

- A** 30
B 40
C 45
D 50
15. Senaraikan semua integer k yang memuaskan ketaksamaan linear $k + 3 > 0$ dan $9k - 20 \leq 16$.
List all the integers k that satisfy the linear inequalities $k + 3 > 0$ and $9k - 20 \leq 16$.
- A** $-3, -2, -1, 0, 1, 2, 3, 4$
B $-2, -1, 0, 1, 2, 3, 4$
C $-3, -2, -1, 0, 1, 2, 3$
D $-2, -1, 0, 1, 2, 3$

16. Dalam Rajah, POR dan TOQ ialah garis lurus.
In Diagram, POR and TOQ are straight lines.

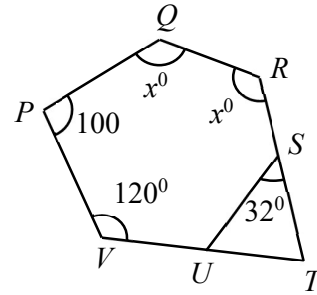


Cari nilai x dan y .

Find the value of x and y .

- A** $x = 12^\circ, y = 54^\circ$
B $x = 12^\circ, y = 45^\circ$
C $x = 30^\circ, y = 45^\circ$
D $x = 30^\circ, y = 72^\circ$
17. Cari penyelesaian untuk/ Find the solution for
- $$\frac{1}{3}(x - 5) \leq \frac{2x + 3}{5}$$
- A** $x \leq -34$
B $x \leq -24$
C $x \geq -24$
D $x \geq -34$

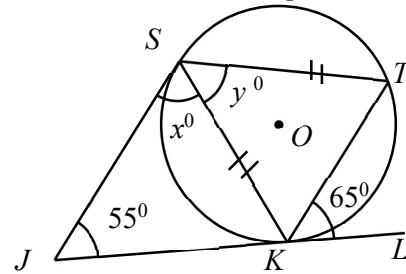
18. Dalam Rajah, $PQRSUV$ ialah heksagon tak sekata dan $SU = ST$. RST dan TUV ialah garis lurus.
In Diagram, $PQRSUV$ is an irregular hexagon with $SU = ST$. RST and TUV are straight lines.



Find the value of x

Cari nilai x

- A** 102
B 123
C 139
D 144
19. Dalam Rajah, JKL ialah tangen yang menyentuh bulatan STK berpusat O , di titik K .
In Diagram, JKL is a tangent which touches a circle STK with centre O , at point K .



Cari nilai $x + y$.

Find the value of $x + y$.

- A** 60
B 120
C 122.5
D 132.5
20. Sebuah bas bertolak dari bandar Puchong pada jam 0825 dan tiba di Perai pada jam 1345. Jika jumlah jarak yang dilaluinya ialah 354 kilometer, hitung laju purata bas itu dalam km/j.
A bus departs from Puchong at 0825 and arrives in Perai at 1345. If the total distance travelled is 354 km, calculate the average speed in km/h.
- A** 64.36
B 66.79
C 66.42
D 68.08

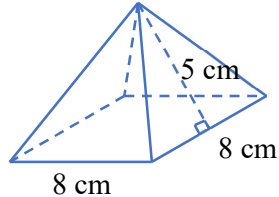
21. Diberi bahawa $205_7 + 164_7 = k_4$, cari nilai k , dalam asas empat.

Given $205_7 + 164_7 = k_4$, find the value of k , in base four?

- A 198
B 402
C 2103
D 3012

22. Rajah menunjukkan sebuah piramid.

Diagram shows a pyramid.



Hitung jumlah luas permukaan, dalam m^2 , bagi piramid itu.

Calculate the surface area, in m^2 , of the pyramid.

- A 3.20×10^{-6}
B 3.20×10^{-2}
C 1.44×10^{-2}
D 1.44×10^{-6}

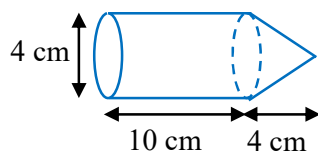
23. Diberi satu garis lurus ialah $y = 3x + 5$, tentukan kecerunan dan pintasan- y baginya.

Given a straight line is $y = 3x + 5$, determine its gradient and y -intercepts.

- A Kecerunan = 3, pintasan- y = 5
B Kecerunan = 3, pintasan- y = -5
C Kecerunan = -3, pintasan- y = 5
D Kecerunan = -3, pintasan- y = -5

24. Rajah menunjukkan gabungan pepejal daripada sebuah kon dan sebuah silinder.

Diagram shows the solid from a cone and a cylinder.



(Guna / Use $\pi = 3.142$)

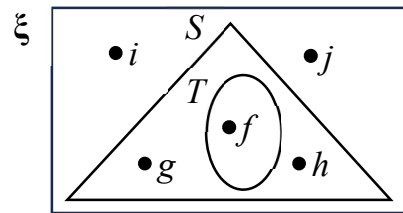
Hitung isi padu, dalam cm^3 , bagi pepejal itu.

Calculate the volume, in cm^3 , of the solid.

- A 142.44
B 192.71
C 519.48
D 569.75

25. Rajah menunjukkan sebuah gambar rajah Venn.

Diagram shows a Venn diagram.



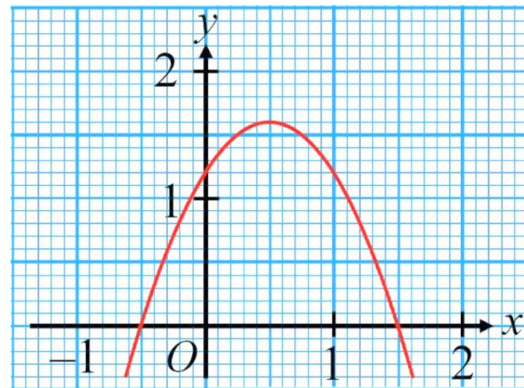
Senaraikan unsur bagi T'

List all the elements of T'

- A $T' = \{f\}$
B $T' = \{g, h\}$
C $T' = \{f, g, h\}$
D $T' = \{g, h, i, j\}$

26. Rajah menunjukkan satu graf fungsi kuadratik.

Diagram shows a graph of quadratic function.



Dengan kaedah graf, tentukan persamaan paksi simetrinya.

By using graph method, determine its equation of the axis of symmetry.

- A $x = -0.5$
B $x = 0.5$
C $x = 1.2$
D $x = 1.5$

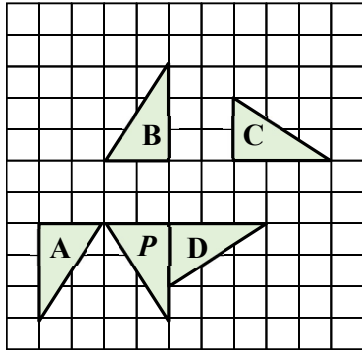
27. Encik Lim membuat pinjaman peribadi sebanyak RM10 000 dari Bank A dengan kadar faedah 4% setahun. Tempoh bayaran balik adalah selama 7 tahun. Berapakah ansuran bulanan yang akan dibayar oleh Encik Lim?

Mr Lim obtained a personal loan of RM10 000 from Bank A with an interest rate of 4% per annum. The repayment period is 7 years. What is the monthly instalment to be paid by Mr Lim?

- A RM152.38
B RM233.33
C RM476.19
D RM1828.57

28. Rajah menunjukkan lima buah segi tiga dilukis pada grid segi empat sama.

Diagram shows five triangles are drawn on square grids.

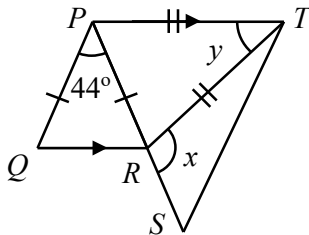


Antara segi tiga A, B, C dan D, segi tiga manakah **bukan** satu imej bagi P di bawah suatu pantulan?

Among the triangles A, B, C and D, which triangle is **not** an image of P under a reflection?

29. Dalam Rajah, PRS ialah garis lurus.

In Diagram, PRS is a straight line.



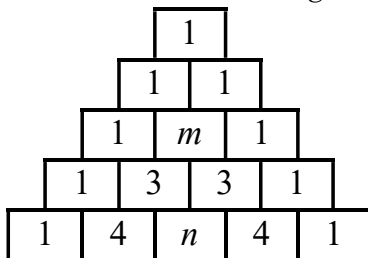
Cari nilai x dan y .

Find the value of x and y .

- A $x = 136^\circ, y = 44^\circ$
 B $x = 124^\circ, y = 68^\circ$
 C $x = 112^\circ, y = 44^\circ$
 D $x = 112^\circ, y = 68^\circ$

30. Rajah menunjukkan sebuah Segi Tiga Pascal.

Diagram shows a Pascal's Triangle.



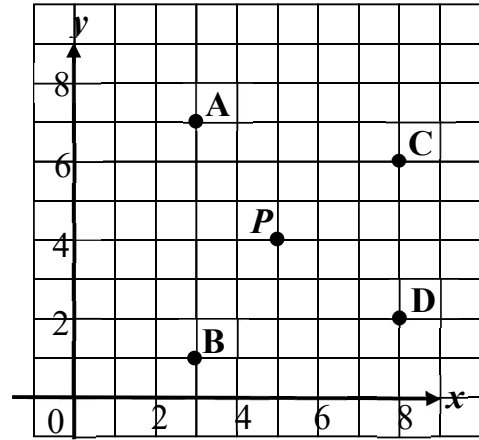
Cari nilai m dan nilai n .

Calculate the value of m and value of n .

- A $m = 2, n = 5$
 B $m = 2, n = 6$
 C $m = 3, n = 5$
 D $m = 3, n = 6$

31. Rajah menunjukkan empat titik dilukis pada satah Cartes. Jika titik Q ialah imej bagi titik P di bawah translasi $\begin{pmatrix} 3 \\ -2 \end{pmatrix}$.

Diagram shows four points drawn on a Cartesian plane. If point Q is the image of point P under a translation $\begin{pmatrix} 3 \\ -2 \end{pmatrix}$.

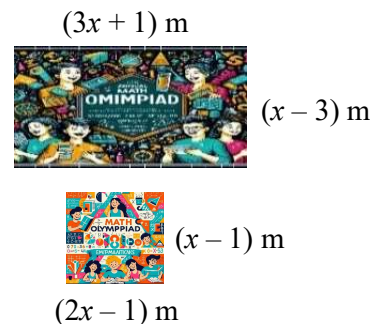


Antara titik A, B, C dan D, yang manakah ialah titik Q ?

Which of the points A, B, C or D, is point Q ?

32. Persatuan Matematik SMK A telah melukis dua buah poster yang berbentuk segi empat tepat bersempena dengan Kuiz Matematik.

The Mathematics Club of SMK A has drawn two rectangular posters in conjunction with Mathematics Competition.



Ungkapkan beza luas antara kedua-dua poster, $L \text{ m}^2$, dalam sebutan x

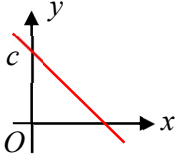
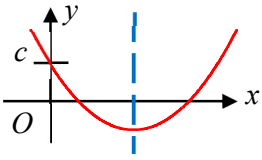
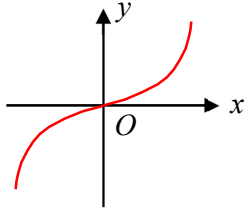
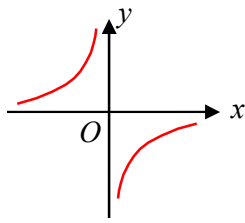
Express the difference in area between the two posters, $L \text{ m}^2$, in terms of x

- A $L = x^2 - 5x - 4$
 B $L = x^2 - 7x - 5$
 C $L = x^2 - 9x - 5$
 D $L = x^2 - 11x - 4$

33. Sebuah kereta mampu bergerak sejauh 10 km dengan isian petrol sebanyak 1 liter. Ungkapkan kos petrol, RM x yang perlu diisi untuk perjalanan sejauh s km jika satu liter petrol berharga RM t .
A car is able to travel as far as 10 km with a litre of petrol. Express the cost, RM x of the petrol that needs to be filled for s km if a litre of petrol costs RM t .

- A $x = \text{RM}0.1st$
 B $x = \text{RM}10st$
 C $x = \text{RM}\frac{10}{s}t$
 D $x = \text{RM}\frac{10}{t}s$

34. Antara berikut, yang manakah adalah benar?
Which of the following is true?

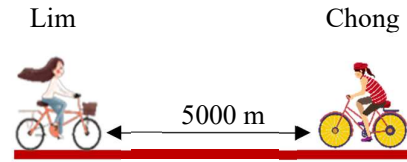
	Fungsi/ Function	Graf fungsi/ Graph of function
A	$y = 5x + 3$	
B	$y = 2x^2 - 5x + 3$	
C	$y = -2x^3$	
D	$y = \frac{3}{x}$	

35. Selesaikan persamaan linear serentak berikut.
Solve the following simultaneous linear equations.

$$\begin{aligned} h - 3k &= 5 \\ h + 3k &= 7 \end{aligned}$$

- A $h = 1, k = 2$
 B $h = 2, k = 1$
 C $h = -1, k = -2$
 D $h = -2, k = -1$

36. Rajah menunjukkan Lim dan Chong sedang menunggang basikal dalam arah yang berbeza.
Diagram shows Lim and Chong riding bikes in different directions.

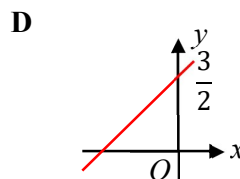
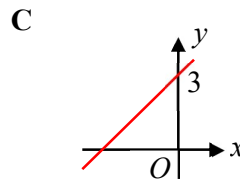
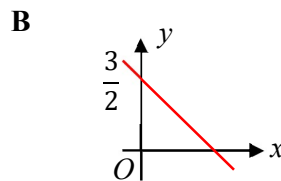
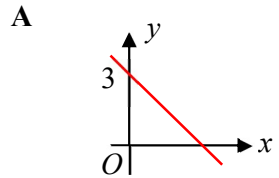


Lim berbasikal dengan purata laju 10 km/j sementara Chong berbasikal dengan purata laju 15 km/j. Jika mereka mula berbasikal pada waktu yang sama, cari masa mereka bertemu.

Lim cycled at an average speed of 10 km/h while Chong cycled at an average speed of 15 km/h. If they start cycling at the same time, find the time they meet.

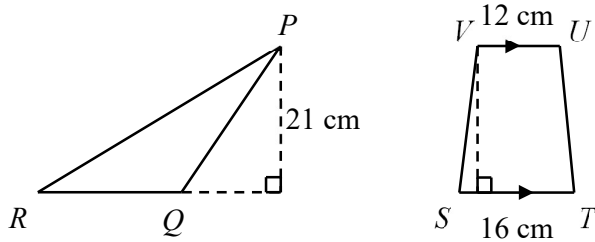
- A 2 minit
 B 5 minit
 C 12 minit
 D 20 minit

37. Antara graf berikut, yang manakah yang mewakili $2y + 4x = 3$?
Which of the following graph represents $2y + 4x = 3$?



38. Dalam Rajah, luas segi tiga PQR adalah sama dengan luas trapezium $STUV$.

In Diagram, the area of triangle PQR is same as the area of the trapezium $STUV$.



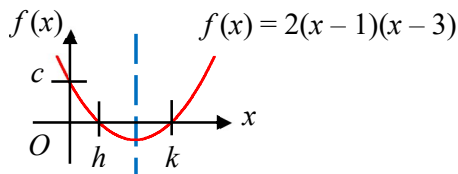
Cari tinggi, dalam cm, trapezium $STUV$.

Find the height, in cm, of the trapezium $STUV$.

- A 25
B 20
C 15
D 10

39. Rajah menunjukkan suatu fungsi kuadratik.

Diagram shows a graph of quadratic function.



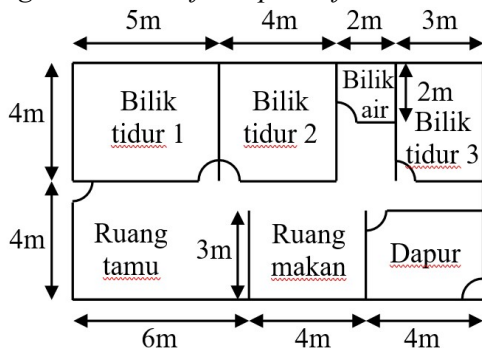
Antara berikut, yang manakah **palsu**?

*Which of the following is **false**?*

- A Punca-punca ialah 1 dan 3
Roots of the equation are 1 and 3
B Pintasan-y ialah 12
y-intercept is 12
C Paksi simetri ialah $x = 2$
Axis of symmetry is $x = 2$
D Titik pusingannya ialah satu titik minimum
Its turning point is a minimum point

40. Rajah menunjukkan pelan lantai sebuah rumah.

Diagram shows a floor plan of a house.



Lantai rumah itu, kecuali lantai bilik tidur, ditutupi dengan Jubin yang berharga RM20 per m^2 .
Hitung jumlah, dalam RM, harga Jubin itu.

The floors, except the bedrooms', are carpeted by mosaics with unit price RM20 per m^2 . Calculate the amount, in RM, of the price of the mosaics needed.

- A 960
B 1120
C 1280
D 2240

KERTAS SOALAN TAMAT END OF QUESTION PAPER

1	B	11	A	21	D	31	D
2	C	12	D	22	C	32	A
3	A	13	D	23	A	33	A
4	D	14	B	24	A	34	B
5	B	15	B	25	D	35	A
6	C	16	A	26	B	36	C
7	C	17	D	27	A	37	B
8	A	18	B	28	D	38	C
9	C	19	D	29	C	39	B
10	C	20	C	30	B	40	C