

# PENILAIAN AKHIR TAHUN



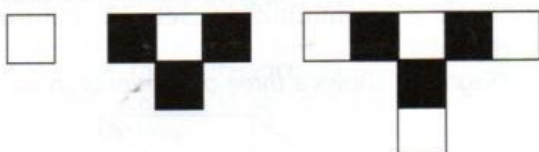
## Bahagian A/ Section A

Jawab **semua** soalan./ Answer **all** questions.

[20 markah/ marks]

- 1 Rajah 1 menunjukkan satu corak.

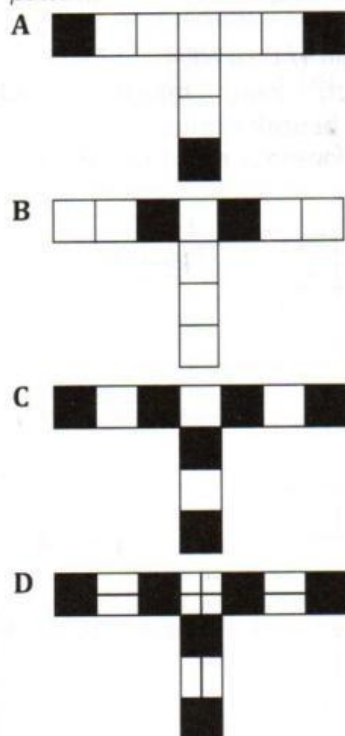
Diagram 1 shows a pattern.



Rajah 1/ Diagram 1

Berdasarkan polanya, tentukan corak yang keempat.

Based on its sequence, determine the fourth pattern.



- 2 Diberi  $y = 2(x - 9) + z^2$ . Jika  $y = 17$  dan  $x = 13$ , hitungkan nilai  $z$ .

Given  $y = 2(x - 9) + z^2$ . If  $y = 17$  and  $x = 13$ , calculate the value of  $z$ .

- A 3                      C 12  
B 9                      D 24

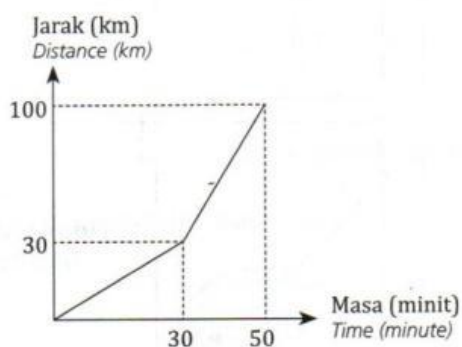
- 3 Kembangkan/ Expand:

$$(x - 2y)(2x + y)$$

- A  $2x^2 + 2y^2 - 3xy$   
B  $2x^2 - 2y^2 - 3xy$   
C  $2x^2 + 2y^2 + 4xy$   
D  $2x^2 - 2y^2 - 4xy$

- 4 Graf berikut ialah sebuah graf jarak-masa bagi sebuah kereta.

The following graph is a distance-time graph of a car.



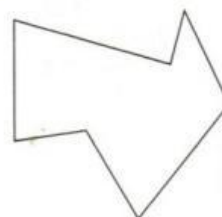
Hitungkan laju purata, dalam m/min, kereta itu.

Calculate the average speed, in m/min, of the car.

- A 0.002  
B 1 000  
C 2 000  
D 120 000

- 5 Rajah 2 menunjukkan sebuah poligon.

Diagram 2 shows a polygon.



Rajah 2/ Diagram 2

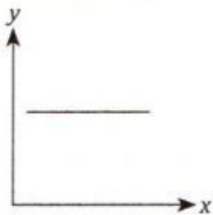
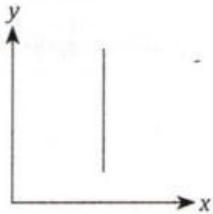
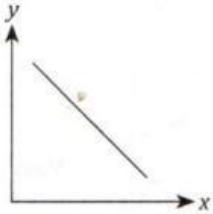
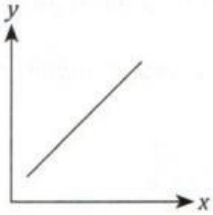
Cari jumlah sudut pedalaman bagi poligon di atas.

Find the total interior angle of the polygon above.

- A  $360^\circ$
- B  $540^\circ$
- C  $720^\circ$
- D  $900^\circ$

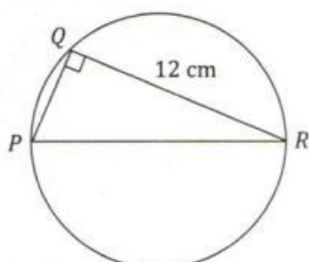
6 Antara berikut, yang manakah adalah betul?

Which of the following is correct?

|   | Graf garis lurus<br>Straight line graph                                             | Kecerunan<br>Gradient        |
|---|-------------------------------------------------------------------------------------|------------------------------|
| A |    | 0                            |
| B |   | Positif<br>Positive          |
| C |  | Tidak tertakrif<br>Undefined |
| D |  | Negatif<br>Negative          |

7 Rajah 3 menunjukkan sebuah bulatan.

Diagram 3 shows a circle.



Rajah 3/ Diagram 3

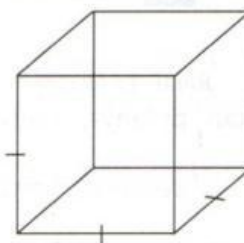
Diberi  $QR = 12$  cm dan luas segi tiga  $PQR$  ialah  $30 \text{ cm}^2$ . Hitungkan luas, dalam  $\text{cm}^2$ , bulatan itu.  
Given  $QR = 12$  cm and the area of triangle  $PQR$  is  $30 \text{ cm}^2$ . Calculate the area, in  $\text{cm}^2$ , of the circle.

[Guna/ Use:  $\pi = \frac{22}{7}$ ]

- A  $78\frac{4}{7}$
- B  $132\frac{11}{14}$
- C  $452\frac{4}{7}$
- D  $531\frac{1}{7}$

8 Rajah 4 menunjukkan sebuah bentuk tiga dimensi.

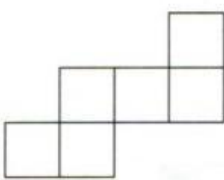
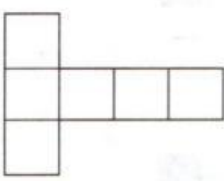
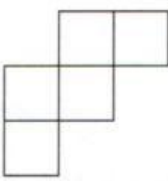
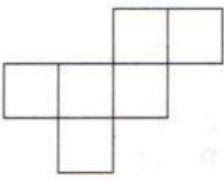
Diagram 4 shows a three-dimensional shape.



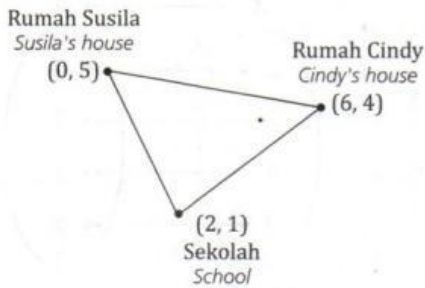
Rajah 4/ Diagram 4

Antara berikut, yang manakah **bukan** bentangan bagi bentuk di atas?

Which of the following is **not** a net of the shape above?

- A 
- B 
- C 
- D 

- 9 Rajah 5 menunjukkan kedudukan rumah Susila, rumah Cindy dan sekolah.  
Diagram 5 shows the positions of Susila's house, Cindy's house and the school.



Rajah 5/ Diagram 5

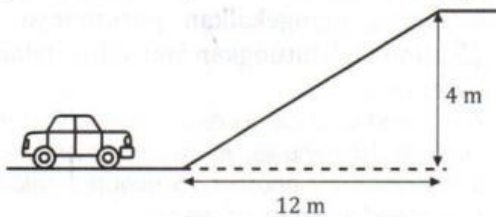
Hitungkan beza jarak, dalam unit, antara rumah Susila ke sekolah dan rumah Cindy ke sekolah.

Calculate the difference in distance, in units, between Susila's house to the school and Cindy's house to school.

- A 0.50  
B 0.53  
C 6.08  
D 9.47

- 10 Rajah 6 menunjukkan sebahagian jalan di sebuah kampung.

Diagram 6 shows a part of the road in a village.



Rajah 6/ Diagram 6

Cari kecerunan jalan itu.

Find the gradient of the road.

- A 3  
B  $\frac{1}{3}$   
C  $-\frac{1}{3}$   
D -3

- 11 Rajah 7 menunjukkan suatu bentuk.  
Diagram 7 shows a shape.



Rajah 7/ Diagram 7

Tentukan peringkat simetri putaran bagi bentuk di atas.

Determine the order of rotational symmetry of the shape above.

- A 12 peringkat  
12th order  
B 9 peringkat  
9th order  
C 6 peringkat  
6th order  
D 3 peringkat  
3rd order

- 12 Armin mengisikan sebuah beg dengan 30 biji guli. Nisbah bilangan guli merah kepada guli kuning ialah 4 : 5 dan nisbah bilangan guli hijau kepada guli merah ialah 3 : 2. Hitungkan kebarangkalian sebiji guli merah dipilih secara rawak daripada beg itu.

Armin filled a bag with 30 marbles. The ratio of the number of red marbles to yellow marbles is 4 : 5 and the ratio of the numbers of green marbles to red marbles is 3 : 2. Calculate the probability of choosing a red marbles randomly from the bag.

- A  $\frac{4}{15}$   
B  $\frac{1}{3}$   
C  $\frac{2}{5}$   
D  $\frac{11}{15}$

- 13 Rajah 8 menunjukkan kapasiti air sebuah baldi.

Diagram 8 shows the water capacity of a pail.



Rajah 8/ Diagram 8

Baldi itu digunakan untuk mengumpul air daripada sebuah paip bocor. Air memenuhi baldi itu pada setiap 15 minit. Hitungkan isi padu, dalam  $\ell$ , air yang dapat dikumpulkan dalam setengah hari.

The pail is used to collect water from a leaked pipe. The water filled up the pail every 15 minutes. Calculate the volume, in  $\ell$ , of water can be collected in half a day.

- A 2.4  
B 24  
C 240  
D 2 400

- 14 Plot batang-dan-daun menunjukkan ketinggian murid dalam kelas 2A.  
The stem-and-leaf plot shows the height of students in class 2A.

Ketinggian murid dalam kelas 2A  
The height of students in class 2A

| Batang<br>Stem | Daun<br>Leaf      |
|----------------|-------------------|
| 12             | 8 8               |
| 13             | 0 1 2 3 6 9       |
| 14             | 2 3 3 5 7 8 8 8 9 |
| 15             | 2 6 7 8 9         |
| 16             | 1 4 5             |

Kekunci: 12 | 8 bermaksud 128 cm

Key: 12 | 8 refers to 128 cm

Antara berikut, yang manakah betul mengenai murid di kelas 2A?

Which of the following is correct about the students in class 2A?

- A Median bagi ketinggian murid dalam kelas 2A ialah 147 cm

The median of the height of students in class 2A is 147 cm

- B Mod ketinggian murid dalam kelas 2A ialah 140 cm

The mode of the height of students in class 2A is 140 cm

- C Min ketinggian murid dalam kelas 2A ialah 147 cm

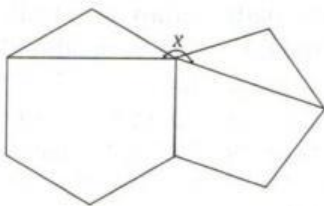
The mean height of students in class 2A is 147 cm

- D Murid yang paling tinggi dalam kelas 2A ialah 149 cm

The tallest student in class 2A is 149 cm

- 15 Rajah 9 menunjukkan sebuah heksagon sekata dan sebuah pentagon sekata.

Diagram 9 shows a regular hexagon and a regular pentagon.



Rajah 9/ Diagram 9

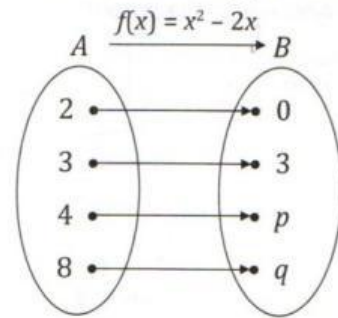
Cari nilai x.

Find the value of x.

- A 66  
B 132  
C 198  
D 228

- 16 Rajah 10 menunjukkan set A dipetakan kepada set B.

Diagram 10 shows set A is mapped into set B.



Rajah 10/ Diagram 10

Antara berikut, yang manakah mewakili p dan q?

Which of the following represents p and q?

|   | p | q  |
|---|---|----|
| A | 2 | 8  |
| B | 4 | 8  |
| C | 8 | 48 |
| D | 8 | 56 |

- 17 Laju sebuah kereta meningkat daripada 20 km/j kepada 60 km/j dalam 10 minit. Jika pemandu mengekalkan pecutannya selama 15 minit lagi, hitungkan laju akhir, dalam km/j, kereta itu.

The speed of a car increases from 20 km/h to 60 km/h in 10 minutes. If the driver maintained his acceleration for another 15 minutes, calculate the final speed, in km/h, of the car.

- A 60  
B 80  
C 100  
D 120

- 18 Berikut menunjukkan satu set data.

The following shows a set of data.

12, 14, 15, x, y, 16, 16, 20

Diberi median dan mod masing-masing ialah 15.5 dan 16. Hitungkan min bagi set data di atas.

Given that the median and mode are 15.5 and 16 respectively. Find the mean of the set of data above.

- A 15  
B 15.5  
C 16  
D 16.5