

- 1 Faktorkan selengkapnya ungkapan $5x^2 - 5$.

Factorise completely the expression $5x^2 - 5$.

- A $5(x^2 + 1)$
- B $5(x^2 - 1)$
- C $5(x + 1)(x - 1)$
- D $5(x - 1)(x - 1)$

- 2 Diberi bahawa $\frac{3a+4}{5} = a + 2b$, ungkapkan a dalam sebutan b .

Given that $\frac{3a+4}{5} = a + 2b$, express a in terms of b .

- A $a = \frac{4-b}{2}$
- B $a = \frac{2b-9}{2}$
- C $a = -2 + 5b$
- D $a = 2 - 5b$

- 3 Antara berikut yang manakah tidak benar?

Which of the following is not true?

- A $3x^0y^0 = 3$
- B $\left(\frac{a}{b}\right)^{-3} = \left(\frac{b}{a}\right)^3$
- C $5m^{-2} = \frac{1}{5m^2}$
- D $(3x^3)^2 = 9x^6$

- 4 Jika $p \times p \times p \times p \times p \times p = (-2)^{\frac{5}{2}}$, nyatakan nilai p dan nilai q .

If $p \times p \times p \times p \times p \times p = (-2)^{\frac{5}{2}}$, state the value of p and of q .

- A $p = 2, q = 12$
- B $p = 2, q = 5$
- C $p = -2, q = 3$
- D $p = -2, q = 12$

- 5 Bundarkan 396.4 betul kepada dua angka bererti.

Round off 396.4 correct to two significant figures.

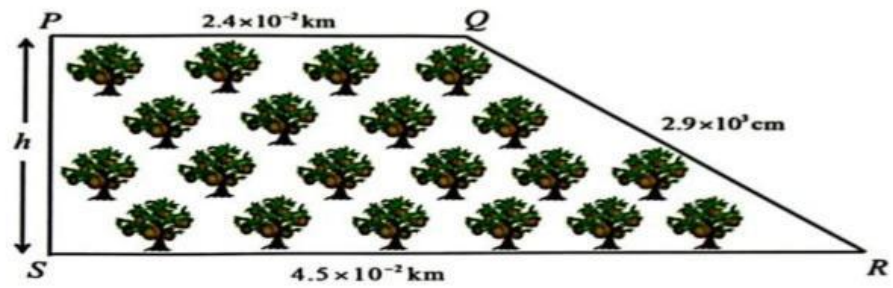
- A 40
- B 400
- C 400.0
- D 400.4

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- 6 Rajah 1 menunjukkan sebuah kebun durian, $PQRS$ berbentuk trapezium.
Diagram 1 shows a durian orchard, $PQRS$, in the shape of a trapezium.



Rajah 1
 Diagram 1

Diberi luas kebun ialah 690 m^2 .

Hitung perimeter, dalam m, kebun durian itu.

Given the area of the orchard is 690 m^2 .

Calculate the perimeter, in m, of the orchard.

- A 1.18×10^2
 B 1.18×10^3
 C 1.27×10^2
 D 1.27×10^3

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- 7 Antara berikut, yang manakah **bukan** suatu pelaburan.
*Which of the following is **not** an investment.*

- A Saham
Shares
- B Amanah Saham
Unit Trust
- C Harta Pusaka
Inheritance
- D Hartanah
Real Estate

- 8 Zainal membuat pinjaman peribadi sebanyak RM30 000 dari Bank Cemerlang dengan kadar faedah 4.5% atas baki. Tempoh bayaran balik adalah selama 9 tahun manakala ansuran bulanan adalah sebanyak RM245.
Berapakah jumlah faedah, dalam RM, yang perlu dibayar oleh Zainal bagi dua bulan pertama?

Zainal makes a personal loan of RM30 000 from Bank Cemerlang with an interest rate of 4.5% on the balance. The repayment period is 9 years while the monthly instalment is RM245.

What is the total amount of interest, in RM, payable by Zainal for the first two months?

- A 112.00
- B 112.50
- C 224.50
- D 225.00

- 9 Rajah 2 menunjukkan suatu jujukan dalam asas 7.
Diagram 2 shows a sequence in base 7.

$3165, 3166, p, \dots$

Rajah 2

Diagram 2

Tentukan nilai p_7 .*Determine the value of p_7 .*

- A 3210
- B 3200
- C 3170
- D 3167

- 10 Firdaus merupakan seorang penganalisis data yang mempunyai pendapatan bulanan RM7 000 dan berhasrat untuk mendirikan rumah tangga dalam masa tiga tahun. Anggaran perbelanjaan perkahwinan berjumlah RM50 000. Oleh itu, beliau ingin menyimpan sebanyak RM1 500 sebulan bagi jangka masa tiga tahun.

Berdasarkan situasi di atas, yang manakah mematuhi komponen realistik dalam konsep SMART untuk mencapai matlamat kewangan Firdaus?

Firdaus is a data analyst with a monthly income of RM7 000 and plans to get married in three years. The wedding expenses are estimated to be RM50 000. Therefore, he wants to save RM1 500 a month for a period of three years.

Based on the situation above, which one fulfills the realistic component in SMART concept to achieve his financial goals?

- A Perbelanjaan perkahwinan adalah RM50 000.
Wedding expenses is RM50 000.
- B Tempoh simpanan ialah tiga tahun.
Saving period is three years.
- C Membuat simpanan RM1 500 sebulan.
Save RM1 500 monthly.
- D Simpanan bulanan sebanyak RM1 500 daripada jumlah pendapatan RM7 000.
Monthly saving of RM1 500 from the total income of RM7 000.

- 12 Syazreel mempunyai polisi perubatan dengan deduktibel sebanyak RM1 000 dan peratusan ko-insurans 75/25 dalam polisinya. Hitung bayaran pampasan yang boleh dituntut oleh Syazreel bagi kos perubatan berjumlah RM60 000.

Syazreel has a medical policy with a deductible RM1 000 and a 75/25 co-insurance percentage in his policy.

Calculate the amount of compensation that can be claimed by Syazreel for medical costs of RM60 000.

- A RM14 750.00
- B RM15 750.00
- C RM44 250.00
- D RM45 000.00

- 13 Suhaila memiliki sebuah rumah teres di Kangar. Cukai pintu yang dikenakan ialah 3%. Diberi bahawa sewa rumah itu dianggarkan RM850 sebulan.

Hitung cukai pintu yang perlu dibayar oleh Suhaila untuk setiap setengah tahun.

Suhaila owns a terrace house in Kangar. The property assessment tax rate is 3%.

It is estimated that the house rental is RM850 per month.

Calculate the property assessment tax payable by Suhaila for each half-year.

- A RM25.50
- B RM51.00
- C RM127.50
- D RM153.00

- 14 Diberi bahawa $5(2r-3) = 7r+3$. Hitung nilai r .

It is given that $5(2r-3) = 7r+3$. Calculate the value of r .

- A -6
B -4
C 4
D 6

- 15 Rajah 3 menunjukkan suatu pernyataan.

Diagram 3 shows a statement.

Perbelanjaan bulanan Maya, RM x , tidak kurang daripada RM1 000.

Maya's monthly expenditure, RM x , is not less than RM1 000.

Rajah 3

Diagram 3

Tentukan ketaksamaan linear yang mewakili pernyataan di atas.

Determine the linear inequality represents the above statement.

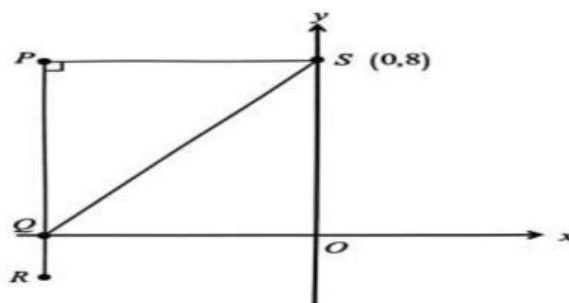
- A $x > 1000$
B $x \geq 1000$
C $x < 1000$
D $x \leq 1000$

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- 16 Rajah 4 menunjukkan garis lurus PQR , PS dan QS dilukis pada suatu satah Cartes.
Diagram 4 shows a straight line PQR , PS and QS drawn on a Cartesian plane.



Rajah 4

Diagram 4

Diberi kecerunan garis lurus QS ialah $1\frac{1}{3}$.

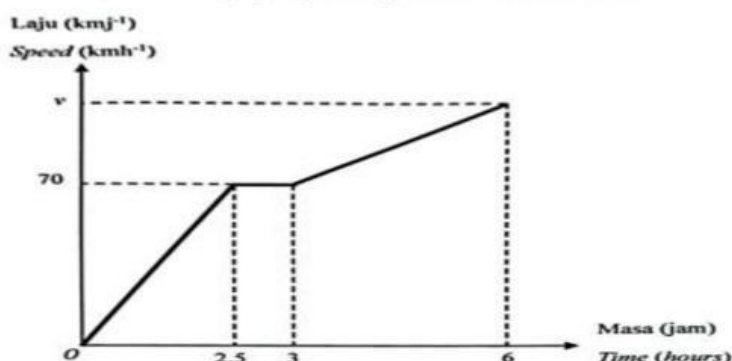
Jika panjang QS dan PQR adalah sama, tentukan koordinat bagi titik R .

Given the gradient of straight line QS is $1\frac{1}{3}$.

If the lengths of QS and PQR are equal, determine the coordinates of point R .

- A $(-6, -5)$
B $(-6, -2)$
C $(-3, -5)$
D $(-2, -6)$

- 19 Rajah 7 menunjukkan graf laju-masa bagi sebuah bas dari bandar S ke bandar T .
Diagram 7 shows speed-time graph of a bus from town S to town T .



Rajah 7
Diagram 7

Diberi jarak dari bandar S ke bandar T ialah $(4v - 35)$ km, hitung nilai v .

Given the distance between town S to town T is $(4v - 35)$ km, calculate the value of v .

- A 105
B 133
C 140
D 147

- 20 Diberi bahawa y berubah secara langsung dengan kuasa dua x .
Antara jadual berikut, yang manakah mewakili hubungan antara y dan x ?

It is given that y varies directly with the square of x .

Which of the following table, represents the relationship between y and x ?

A	<table><tr><td>x</td><td>3</td><td>4</td><td>5</td></tr><tr><td>y</td><td>18</td><td>32</td><td>75</td></tr></table>	x	3	4	5	y	18	32	75
x	3	4	5						
y	18	32	75						
B	<table><tr><td>x</td><td>2</td><td>3</td><td>5</td></tr><tr><td>y</td><td>8</td><td>9</td><td>25</td></tr></table>	x	2	3	5	y	8	9	25
x	2	3	5						
y	8	9	25						
C	<table><tr><td>x</td><td>1</td><td>2</td><td>4</td></tr><tr><td>y</td><td>3</td><td>12</td><td>27</td></tr></table>	x	1	2	4	y	3	12	27
x	1	2	4						
y	3	12	27						
D	<table><tr><td>x</td><td>1</td><td>2</td><td>3</td></tr><tr><td>y</td><td>2</td><td>8</td><td>18</td></tr></table>	x	1	2	3	y	2	8	18
x	1	2	3						
y	2	8	18						

- 21 Syarikat Aman Jaya mendapati bahawa jumlah bola yang dijual, J , berubah secara langsung dengan kos iklan mereka, H , dan berubah secara songsang dengan harga sebiji bola, P . Jika RM18 000 dibelanjakan untuk iklan dan sebiji bola berharga RM30, maka 3200 biji bola telah terjual.

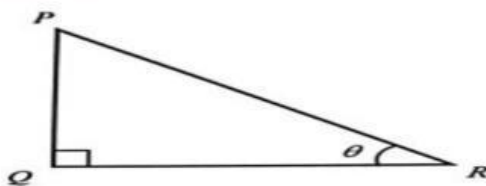
Berapa biji bola yang dijual sekiranya jumlah kos iklan dan harga sebiji bola dinaikkan masing-masing menjadi RM48 000 dan RM40?

Syarikat Aman Jaya found that the number of balls sold, J , varies directly as their advertising cost, H , and inversely as the price of a ball, P . If RM18 000 was spent on advertising and the price of a ball was RM30, then 3200 balls have been sold.

Calculate the number of balls sold if the total cost of advertising and the price of a ball are increased to RM48 000 and RM40 respectively.

- A 1200
B 1600
C 3200
D 6400

- 26 Rajah 9 menunjukkan segi tiga bersudut tegak PQR .
Diagram 9 shows a right-angled triangle PQR .



Rajah 9
Diagram 9

Diberi bahawa $\cos \theta = \frac{4}{5}$, hitung nilai $\tan \theta$.

It is given that $\cos \theta = \frac{4}{5}$, calculate the value of $\tan \theta$.

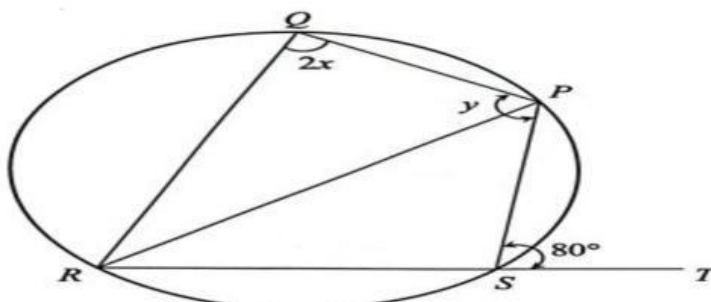
- A $\frac{3}{4}$
- B $\frac{4}{3}$
- C $\frac{5}{4}$
- D $\frac{3}{5}$

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- 27 Rajah 10 menunjukkan satu bulatan $PQRS$.
Diagram 10 shows a circle $PQRS$.



Rajah 10
Diagram 10

Diberi $\angle QRS = 68^\circ$ dan RST ialah garis lurus.

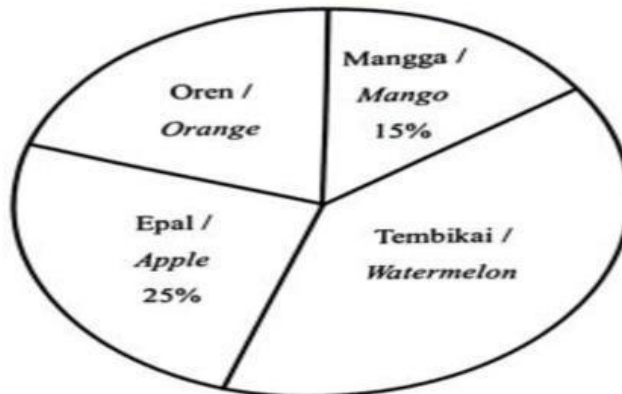
Hitung nilai $y - x$.

Given $\angle QRS = 68^\circ$ and RST is a straight line.

Calculate the value of $y - x$.

- A 22°
- B 32°
- C 67°
- D 72°

- 31** Rajah 12 ialah carta pai menunjukkan jenis buah yang digemari oleh 360 orang pelajar.
Diagram 12 shows a pie chart of the type of favourite fruits of 360 students.



Rajah 12
Diagram 12

Diberi bahawa 72 orang pelajar menggemari buah oren.

Hitung beza bilangan pelajar, antara jenis buah yang paling digemari dengan yang paling kurang digemari.

It is given that 72 students favour oranges.

Calculate the difference number of students between the most and the least favourite fruits.

- A** 25
- B** 54
- C** 55
- D** 90