NO. KAD PENGENALAN | | | | | | | - | | | - | | | | |

ANGKA GILIRAN | | | | | | | | | |

SOALAN PRAKTIS BESTARI
PROJEK JAWAB UNTUK JAYA (JUJ) 2017

SIJIL PELAJARAN MALAYSIA 3472/1

ADDITIONAL MATHEMATICS
Kertas 1 / Set 2

2 jam Dua jam

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

1. *Tulis* **nombor kad pengenalan** *dan* **angka giliran** *anda pada petak yang disediakan.*
2. *Kertas soalan ini adalah dalam dwibahasa.*
3. *Soalan dalam Bahasa Inggeris mendahului soalan yang sepadan dalam bahasa Melayu.*
4. *Calon dibenarkan menjawab keseluruhan atau sebahagian soalan sama ada dalam Bahasa Inggeris atau Bahasa Melayu.*
5. *Calon dikehendaki membaca maklumat di halaman belakang kertas soalan ini.*

Untuk Kegunaan Pemeriksa		
Kod Pemeriksa:		
Soalan	Markah Penuh	Markah Diperoleh
1	3	
2	2	
3	3	
4	4	
5	4	
6	2	
7	3	
8	3	
9	3	
10	3	
11	3	
12	3	
13	4	
14	4	
15	4	
16	4	
17	3	
18	3	
19	3	
20	4	
21	3	
22	3	
23	3	
24	3	
25	4	
Jumlah	80	

Kertas soalan ini mengandungi 29 halaman bercetak

The following formulae may be helpful in answering the questions. The symbols given are the ones commonly used.

ALGEBRA

1. $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

2. $a^m \times a^n = a^{m+n}$

3. $a^m \div a^n = a^{m-n}$

4. $(a^m)^n = a^{nm}$

5. $\log_a mn = \log_a m + \log_a n$

6. $\log_a \dfrac{m}{n} = \log_a m - \log_a n$

7. $\log_a m^n = n \log_a m$

8. $\log_a b = \dfrac{\log_c b}{\log_c a}$

9. $T_n = a + (n-1)d$

10. $S_n = \dfrac{n}{2}[2a + (n-1)d]$

11. $T_n = ar^{n-1}$

12. $S_n = \dfrac{a(r^n - 1)}{r - 1} = \dfrac{a(1 - r^n)}{1 - r}$, $(r \neq 1)$

13. $S_\infty = \dfrac{a}{1 - r}$, $|r| < 1$

CALCULUS

1. $y = uv$, $\dfrac{dy}{dx} = u\dfrac{dv}{dx} + v\dfrac{du}{dx}$

2. $y = \dfrac{u}{v}$, $\dfrac{dy}{dx} = \dfrac{v\dfrac{du}{dx} - u\dfrac{dv}{dx}}{v^2}$,

3. $\dfrac{dy}{dx} = \dfrac{dy}{du} \times \dfrac{du}{dx}$

4. Area under a curve $= \int_a^b y \, dx$ or

$= \int_a^b x \, dy$

5. Volume generated

$= \int_a^b \pi y^2 \, dx$ or

$= \int_a^b \pi x^2 \, dy$

GEOMETRY

1. Distance $= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

2. Midpoint

$(x, y) = \left(\dfrac{x_1 + x_2}{2}, \dfrac{y_1 + y_2}{2} \right)$

3. $|r| = \sqrt{x^2 + y^2}$

4. $\hat{r} = \dfrac{xi + yj}{\sqrt{x^2 + y^2}}$

5. A point dividing a segment of a line

$(x, y) = \left(\dfrac{nx_1 + mx_2}{m + n}, \dfrac{ny_1 + my_2}{m + n} \right)$

6. Area of triangle $=$

$\dfrac{1}{2}\left| (x_1 y_2 + x_2 y_3 + x_3 y_{1_1}) - (x_2 y_1 + x_3 y_2 + x_1 y_3) \right|$

STATISTICS

1. $\bar{x} = \dfrac{\sum x}{N}$

2. $\bar{x} = \dfrac{\sum fx}{\sum f}$

3. $\sigma = \sqrt{\dfrac{\sum (x-\bar{x})^2}{N}} = \sqrt{\dfrac{\sum x^2}{N} - \bar{x}^2}$

4. $\sigma = \sqrt{\dfrac{\sum f(x-\bar{x})^2}{\sum f}} = \sqrt{\dfrac{\sum fx^2}{\sum f} - \bar{x}^2}$

5. $m = L + \left[\dfrac{\frac{1}{2}N - F}{f_m}\right]C$

7. $\bar{I} = \dfrac{\sum w_1 I_1}{\sum w_1}$

8. ${}^nP_r = \dfrac{n!}{(n-r)!}$

9. ${}^nC_r = \dfrac{n!}{(n-r)!r!}$

10. $P(A \cup B) = P(A) + P(B) - P(A \cap B)$

11. $P(X = r) = {}^nC_r p^r q^{n-r}$, $p + q = 1$

12. Mean $\mu = np$

13. $\sigma = \sqrt{npq}$

14. $z = \dfrac{x-\mu}{\sigma}$

TRIGONOMETRY

1. Arc length, $s = r\theta$

2. Area of sector , $L = \dfrac{1}{2}r^2\theta$

3. $\sin^2 A + \cos^2 A = 1$

4. $\sec^2 A = 1 + \tan^2 A$

5. $\text{cosec}^2 A = 1 + \cot^2 A$

6. $\sin 2A = 2 \sin A \cos A$

7. $\cos 2A = \cos^2 A - \sin^2 A$

9. $\sin(A \pm B) = \sin A \cos B \pm \cos A \sin B$

10. $\cos(A \pm B) = \cos A \cos B \mp \sin A \sin B$

11. $\tan(A \pm B) = \dfrac{\tan A \pm \tan B}{1 \mp \tan A \tan B}$

12. $\dfrac{a}{\sin A} = \dfrac{b}{\sin B} = \dfrac{c}{\sin C}$

13. $a^2 = b^2 + c^2 - 2bc \cos A$

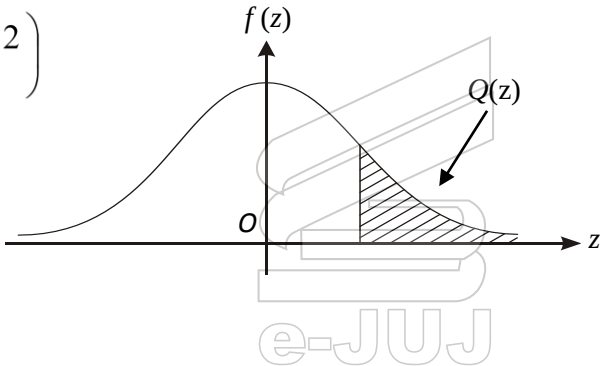
14. Area of triangle $= \dfrac{1}{2}ab \sin C$

THE UPPER TAIL PROBABILITY Q(z) FOR THE NORMAL DISTRIBUTION N(0,1)
KEBARANGKALIAN HUJUNG ATAS Q(z) *BAGI TABURAN NORMAL* N(0, 1)

z	0	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
											Minus / *Tolak*								
0.0	0.5000	0.4960	0.4920	0.4880	0.4840	0.4801	0.4761	0.4721	0.4681	0.4641	4	8	12	16	20	24	28	32	36
0.1	0.4602	0.4562	0.4522	0.4483	0.4443	0.4404	0.4364	0.4325	0.4286	0.4247	4	8	12	16	20	24	28	32	36
0.2	0.4207	0.4168	0.4129	0.4090	0.4052	0.4013	0.3974	0.3936	0.3897	0.3859	4	8	12	15	19	23	27	31	35
0.3	0.3821	0.3783	0.3745	0.3707	0.3669	0.3632	0.3594	0.3557	0.3520	0.3483	4	7	11	15	19	22	26	30	34
0.4	0.3446	0.3409	0.3372	0.3336	0.3300	0.3264	0.3228	0.3192	0.3156	0.3121	4	7	11	15	18	22	25	29	32
0.5	0.3085	0.3050	0.3015	0.2981	0.2946	0.2912	0.2877	0.2843	0.2810	0.2776	3	7	10	14	17	20	24	27	31
0.6	0.2743	0.2709	0.2676	0.2643	0.2611	0.2578	0.2546	0.2514	0.2483	0.2451	3	7	10	13	16	19	23	26	29
0.7	0.2420	0.2389	0.2358	0.2327	0.2296	0.2266	0.2236	0.2206	0.2177	0.2148	3	6	9	12	15	18	21	24	27
0.8	0.2119	0.2090	0.2061	0.2033	0.2005	0.1977	0.1949	0.1922	0.1894	0.1867	3	5	8	11	14	16	19	22	25
0.9	0.1841	0.1814	0.1788	0.1762	0.1736	0.1711	0.1685	0.1660	0.1635	0.1611	3	5	8	10	13	15	18	20	23
1.0	0.1587	0.1562	0.1539	0.1515	0.1492	0.1469	0.1446	0.1423	0.1401	0.1379	2	5	7	9	12	14	16	19	21
1.1	0.1357	0.1335	0.1314	0.1292	0.1271	0.1251	0.1230	0.1210	0.1190	0.1170	2	4	6	8	10	12	14	16	18
1.2	0.1151	0.1131	0.1112	0.1093	0.1075	0.1056	0.1038	0.1020	0.1003	0.0985	2	4	6	7	9	11	13	15	17
1.3	0.0968	0.0951	0.0934	0.0918	0.0901	0.0885	0.0869	0.0853	0.0838	0.0823	2	3	5	6	8	10	11	13	14
1.4	0.0808	0.0793	0.0778	0.0764	0.0749	0.0735	0.0721	0.0708	0.0694	0.0681	1	3	4	6	7	8	10	11	13
1.5	0.0668	0.0655	0.0643	0.0630	0.0618	0.0606	0.0594	0.0582	0.0571	0.0559	1	2	4	5	6	7	8	10	11
1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495	0.0485	0..0475	0.0465	0.0455	1	2	3	4	5	6	7	8	9
1.7	0.0446	0.0436	0.0427	0.0418	0.0409	0.0401	0.0392	0.0384	0.0375	0.0367	1	2	3	4	4	5	6	7	8
1.8	0.0359	0.0351	0.0344	0.0336	0.0329	0.0322	0.0314	0.0307	0.0301	0.0294	1	1	2	3	4	4	5	6	6
1.9	0.0287	0.0281	0.0274	0.0268	0.0262	0.0256	0.0250	0.0244	0.0239	0.0233	1	1	2	2	3	4	4	5	5
2.0	0.0228	0.0222	0.0217	0.0212	0.0207	0.0202	0.0197	0.0192	0.0188	0.0183	0	1	1	2	2	3	3	4	4
2.1	0.0179	0.0174	0.0170	0.0166	0.0162	0.0158	0.0154	0.0150	0.0146	0.0143	0	1	1	2	2	2	3	3	4
2.2	0.0139	0.0136	0.0132	0.0129	0.0125	0.0122	0.0119	0.0116	0.0113	0.0110	0	1	1	1	2	2	2	3	3
2.3	0.0107	0.0104	0.0102								0	1	1	1	1	2	2	2	2
				0.00990	0.00964	0.00939	0.00914				3	5	8	10	13	15	18	20	23
								0.00889	0.00866	0.00842	2	5	7	9	12	14	16	16	21
2.4	0.00820	0.00798	0.00776	0.00755	0.00734						2	4	6	8	11	13	15	17	19
						0.00714	0.00695	0.00676	0.00657	0.00639	2	4	6	7	9	11	13	15	17
2.5	0.00621	0.00604	0.00587	0.00570	0.00554	0.00539	0.00523	0.00508	0.00494	0.00480	2	3	5	6	8	9	11	12	14
2.6	0.00466	0.00453	0.00440	0.00427	0.00415	0.00402	0.00391	0.00379	0.00368	0.00357	1	2	3	5	6	7	9	9	10
2.7	0.00347	0.00336	0.00326	0.00317	0.00307	0.00298	0.00289	0.00280	0.00272	0.00264	1	2	3	4	5	6	7	8	9
2.8	0.00256	0.00248	0.00240	0.00233	0.00226	0.00219	0.00212	0.00205	0.00199	0.00193	1	1	2	3	4	4	5	6	6
2.9	0.00187	0.00181	0.00175	0.00169	0.00164	0.00159	0.00154	0.00149	0.00144	0.00139	0	1	1	2	2	3	3	4	4
3.0	0.00135	0.00131	0.00126	0.00122	0.00118	0.00114	0.00111	0.00107	0.00104	0.00100	0	1	1	2	2	2	3	3	4

$$f(z) = \frac{1}{\sqrt{2\pi}} \exp\left(-\frac{1}{2}z^2\right)$$

$$Q(z) = \int_k^{\infty} f(z)\, dz$$



Example / *Contoh*:

If $X \sim N(0, 1)$, then $P(X > k) = Q(k)$

Jika $X \sim$ N(0, 1), *maka* $P(X > k) = Q(k)$

1 Find,

Cari,

(a) the value of ${}^{n}C_{n}$,

nilai ${}^{n}C_{n}$,

(b) the value of x when ${}^{5}C_{x} = \dfrac{5!}{3!x!}$.

nilai x apabila ${}^{5}C_{x} = \dfrac{5!}{3!x!}$.

[3 marks]
[3 *markah*]

For Examiner's Use

Answer / *Jawapan*:

1

3

For Examiner's Use

2 It is given that $5^{2h}\left(\frac{1}{125^{k}}\right)=5^{0}$, express h in term of k.

Diberi bahawa $5^{2h}\left(\frac{1}{125^{k}}\right)=5^{0}$, *ungkapkan* h *dalam sebutan* k.

[2 marks]
[2 *markah*]

Answer / *Jawapan*:

2

2

3 Solve the equation $3^{1-2x} = \frac{1}{2^x}$. Give your answer correct to three decimal places.

Selesaikan persamaan $3^{1-2x} = \frac{1}{2^x}$ *. Berikan jawapan anda betul kepada tiga tempat perpuluhan.*

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

For Examiner's Use

3

3

For Examiner's Use

4 Given that $p = 2^x$ and $q = 2^y$, express $\log_{\sqrt{2}}\left(\frac{p^2q^3}{64}\right)$ in terms of *x* and of *y*.

Diberi $p = 2^x$ *dan* $q = 2^y$ *,ungkapkan* $\log_{\sqrt{2}}\left(\frac{p^2q^3}{64}\right)$ *dalam sebutan x dan y.*

[4 marks]
[4 *markah*]

Answer / *Jawapan*:

4

4

5 It is given that quadratic equation $x^2 + px + (-2)^2 = (-2)^2 + 12$.

Diberi bahawa persamaan kuadratik $x^2 + px + (-2)^2 = (-2)^2 + 12$.

(a) Find the value of p.

Cari nilai p.

(b) Hence, solve the quadratic equation.

Seterusnya, selesaikan persamaan kuadratik tersebut.

[4 marks]
[4 *markah*]

Answer / *Jawapan*:

For Examiner's Use

5

4

For Examiner's Use

6 It is given that the functions $h(x) = 2x - 5$ and $g(x) = 4x$.

Find the value of $hg(2)$.

Diberi bahawa fungsi $h(x) = 2x - 5$ *dan* $g(x) = 4x$.

Cari nilai $hg(2)$.

[2 marks]
[2 *markah*]

Answer / *Jawapan*:

6

2

7 E-Zan Electric uses this formula, $f(x) = 750 - 10x$ to show the depreciation value of computers, where f the value of a computer and f is the number of months since its purchase.

E-Zan Electric menggunakan formula , $f(x) = 750 - 10x$ *untuk penyusutan nilai komputer, di mana* f *adalah nilai sebuah komputer dan* x *adalah bilangan bulan sejak pembelian.*

(a) Find f^{-1}

Cari f^{-1}

(b) How many months the payment had been done if the depreciation value of the computer is less than *RM* 400?

Berapa bulankah pembayaran telah dibuat jika susut nilai bagi komputer itu kurang daripada RM400?

[3 marks]
[3 *markah*]

For Examiner's Use

Answer / *Jawapan*:

7

3

For Examiner's Use

8 It is given the function $g : x \to \frac{4x+k}{x+2}, x \neq h$ and an inverse function $g^{-1} : x \to \frac{-2x-3}{x-4}, x \neq 4$. Find the value of h and of k.

Diberi bahawa fungsi $g : x \to \frac{4x+k}{x+2}, x \neq h$ *dan fungsi songsangnya* $g^{-1} : x \to \frac{-2x-3}{x-4}, x \neq 4$. *Cari nilai* h *dan nilai* k.

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

8

3

For Examiner's Use

9 Diagram 9 shows the function of $y = (x - k)^2 + 2$, where k is a constant.

Rajah 9 *menunjukkan fungsi bagi* $y = (x - k)^2 + 2$, *di mana* k *adalah pemalar*.

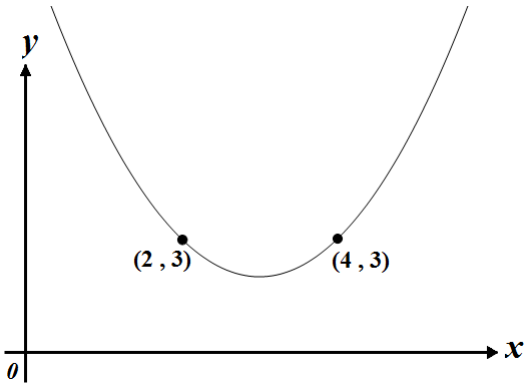


Diagram 9
Rajah 9

Find
Cari

(a) the value of k,

nilai k,

(b) the equation of the axis of symmetry,

persamaan paksi simetri,

(c) the coordinates of the minimum points.

koordinat titik minimum.

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

9

3

For Examiner's Use

10 The function $f(x) = x^2 - 8kx + 20k^2 + 1$ has a minimum value of $r^2 + 4k$, where r and k are constants.Find the value of r if $k = 2$.

Fungsi $f(x) = x^2 - 8kx + 20k^2 + 1$ *mempunyai nilai minimum* $r^2 + 4k$, *dengan keadaan r dan k adalah pemalar. Cari nilai r jika* $k = 2$.

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

10

4

11 It is given that $x, 4, 7, ..., 58, ...,$ is an arithmetic progression.

Diberi $x, 4, 7, ..., 58, ...,$ *ialah janjang aritmetik.*

(a) Find the value of x.

Cari nilai x.

(b) Write down the three consecutive terms after 58.

Tuliskan tiga sebutan berturutan selepas 58.

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

For Examiner's Use

11

3

For Examiner's Use

12 It is given that the first three terms of a geometric progression is $x+8, x-4$ dan $x-12$

Diberi bahawa tiga sebutan pertama bagi satu janjang geometri ialah $x+8, x-4$ *dan* $x-12$

Find

Cari

(a) the value of x,

nilai bagi x,

(b) the common ratio.

nisbah sepunya.

[3 marks]
[3 *markah*]

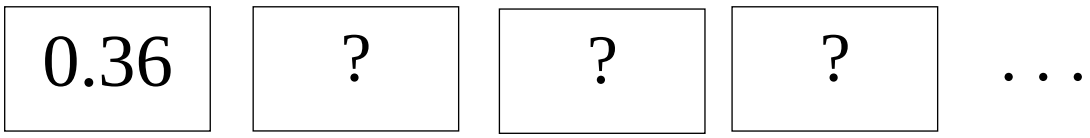
Answer / *Jawapan*:

12

3

13

For Examiner's Use



Card/*Kad* 1 Card/*Kad* 2 Card/*Kad* 3 Card/*Kad* 4

Diagram 13

Rajah 13

Diagram 13 shows some piece of paper card that are numbering started from 0.36. The number of second card and the next card are 1% of the previous card.

Rajah 13 di atas menunjukkan beberapa keratan kad yang dinomborkan bermula dengan 0.36. Nombor kad kedua dan seterusnya ialah 1% *daripada kad sebelumnya.*

(a) Find the number of the fifth card.

Cari nombor pada kad yang ke-lima,

(b) If the total of all cards are unknown, write down the sum of the numbers of the cards in the fraction in simplest form.

Jika bilangan kad itu tidak diketahui, tuliskan hasil tambah nombor-nombor kad itu dalam bentuk pecahan paling ringkas.

[4 marks]
[4 *markah*]

Answer / *Jawapan*:

13

4

For Examiner's Use

14 Diagram 14 shows a straight line graph of xy^2 against x^3.

Rajah 14 *menunjukkan graf garis lurus bagi* xy^2 melawan x^3.

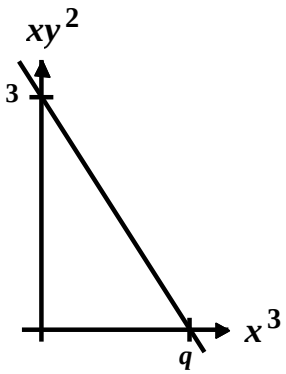


Diagram 14
Rajah 14

It is given that $y = \sqrt{4x^2 + \frac{p}{x}}$, find the value of *p* and of *q*.

Diberi bahawa $y = \sqrt{4x^2 + \frac{p}{x}}$, *cari nilai bagi p dan q.*

[4 marks]
[4 *markah*]

Answer / *Jawapan*:

14

4

15 The straight line $2x+3y-9=0$ and $x-2y-1=0$ intersect at the point *P*. Find
Garis lurus $2x+3y-9=0$ *dan* $x-2y-1=0$ *bersilang pada titik P. Cari*

For Examiner's Use

(a) the coordinate of *P*
koordinat titik P

(b) the equation of the straight line which passes through point *P* and is perpendicular to the straight line $2x+3y-9=0$
persamaan garis lurus yang melalui titik P dan berserenjang dengan garis lurus $2x+3y-9=0$

[4 marks]
[4 *markah*]

Answer / *Jawapan*:

15

4

For Examiner's Use

16 The diagram 16 shows a parallelogram $ABCD$ such that BED is a straight line.

Rajah 16 menunjukkan segiempat selari $ABCD$ dengan BED adalah garis lurus.

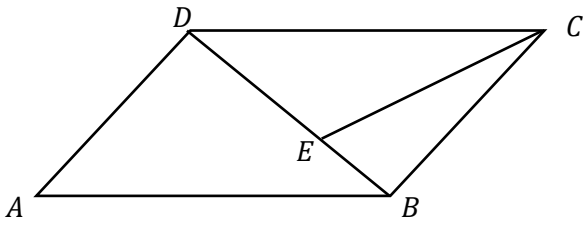


Diagram 16
Rajah 16

It is given that $\overrightarrow{AB}$=12p, $\overrightarrow{AD}$=6q and $\overrightarrow{DE} = 2\overrightarrow{EB}$, express each of following in terms of p and of q.

Diberi bahawa $\overrightarrow{AB}$=12p, $\overrightarrow{AD}$=6q dan $\overrightarrow{DE} = 2\overrightarrow{EB}$, tunjukkan dalam sebutan p dan q

(a) $\overrightarrow{BD}$

(b) $\overrightarrow{EC}$

[4 marks]
[4 *markah*]

Answer / *Jawapan*:

16

4

17 A set of data contains five positive integers. The mean and the median is 7 while the mod is 5. List down the set of the data.

Satu set data yang mempunyai lima integer yang positif. Min dan median adalah 7 *manakala mod adalah* 5*. Senaraikan set data tersebut.*

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

For Examiner's Use

17

3

For Examiner's Use

18 A box contains 4 red balls and x green balls. The probability of getting a green ball is $\frac{3}{5}$. If y green balls are removed from the box, the probability of getting a green ball becomes $\frac{1}{3}$. Find the value of x and the value of y.

Sebuah kotak mengandungi 4 *biji bola merah dan* x *biji bola hijau. Kebarangkalian mendapatkan sebiji bola hijau ialah* $\frac{3}{5}$. *Jika* y *bola hijau dikeluarkan dari kotak , kebarangkalian mendapat sebiji bola hijau menjadi* $\frac{1}{3}$. *Cari nilai* x *dan nilai* y.

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

18

3

19

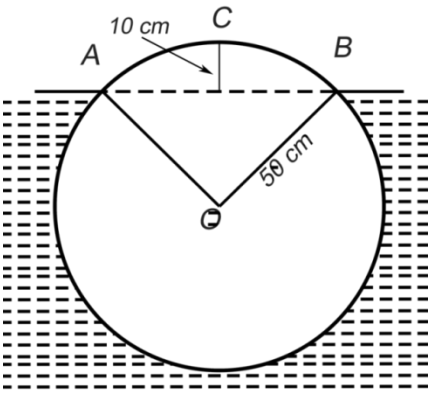


Diagram 19

Rajah 19

For Examiner's Use

Diagram 19 shows the uniform circular cross-section of timber with a radius of 50 *cm* of load on the water. Point *A* and point *B* are located on the water's surface and the highest point *C* is 10 *cm* above the water surface. Calculate

Rajah 19 *menunjukkan keratan rentas membulat seragam bagi sebatang balak dengan jejari 50 cm yang terapung di atas air. Titik A dan titik B terletak pada permukaan air dan titik tertinggi C ialah* 10 cm *di atas permukaan air. Hitung*

(a) $\angle AOB$ in radian
$\angle AOB$ *dalam radian,*

(b) length of arc *ACB*
panjang lengkok ACB

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

19

3

For Examiner's Use

20 It is given that $\tan\alpha = \frac{8}{15}$ and $\sin\beta = \frac{5}{13}$, where α an acute angle and β is an obtuse angle.

Diberi bahawa $\tan\alpha = \frac{8}{15}$ *dan* $\sin\beta = \frac{5}{13}$ *, dengan keadaan* α *ialah sudut tirus dan* β *ialah sudut cakah.*

Find

Cari

(a) cot α ,

kot α ,

(b) $\tan(\alpha + \beta)$

[4 marks]
[4 *markah*]

Answer / *Jawapan*:

20

4

21

For Examiner's Use

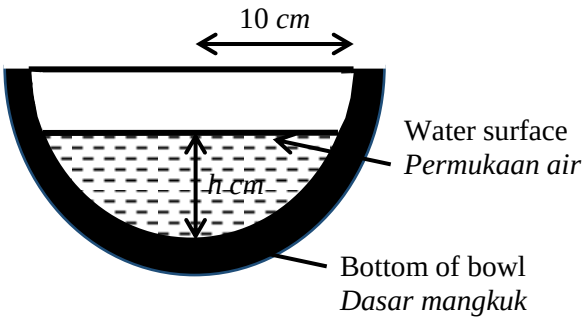


Diagram 21
Rajah 21

Diagram 21 shows a hemisphere bowl with the radius of 10 cm. Water is boiled into the bowl with height, *h* cm, the water is increasing at the rate of 0.2 cms^{-1}. Find the water level, *h* when the rate of increase in the surface area of the water *at* $1.6\pi\ cm^2s^{-1}$.

Rajah 21 *menunjukkan sebuah mangkuk berbentuk hemisfera dengan jejari* 10 cm. *Air dituangkan ke dalam mangkuk itu dengan keadaan tinggi, h cm, air itu bertambah dengan kadar* 0.2 cms^{-1}. *Cari paras air , h ketika kadar pertambahan luas permukaan air itu pada* $1.6\pi\ cm^2s^{-1}$.

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

21

3

For Examiner's Use

22 It is given that $f(x) = 3x^2 + 4x$, find the values of x if $2f(x) - 22 = f'(x) - 3f''(x)$.

Diberi bahawa $f(x) = 3x^2 + 4x$, *cari nilai – nilai bagi x jika* $2f(x) - 22 = f'(x) - 3f''(x)$.

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

22

3

23 It is given that $\int \frac{k}{(1+x)^{n+1}}\,dx = -\frac{5}{3}(1+x)^{-3} + c$, find the values of k and of n.

Diberi bahawa $\int \frac{k}{(1+x)^{n+1}}\,dx = -\frac{5}{3}(1+x)^{-3} + c$ *, cari nilai* k *dan* n.

[3 marks]
[3 *markah*]

For Examiner's Use

Answer / *Jawapan*:

23

3

For Examiner's Use

24 In an examination, probability of a student to answer Physics questions correctly is p . Find the value of p and the number of the students in which the mean and the variance are 40 and 24 respectively.

Dalam satu peperiksaan, kebarangkalian pelajar menjawab dengan tepat untuk soalan Fizik ialah p *. Cari nilai* p *dan bilangan pelajar di mana min dan varian masing-masing ialah* 40 *dan* 24

[3 marks]
[3 *markah*]

Answer / *Jawapan*:

24

3

For Examiner's Use

25 An IQ test shows that the scores follow a distribution of N(65, 18). It is desirable to arrange the participants into three groups which is low intelligence, average intelligence and high intelligence so that 20% of the partipants are filled under the first group, 65% in the second group and 15% in the third group. What are the scores that differentiate each intelligence group from one another?

Ujian IQ menunjukkan bahawa skor mengikut taburan N(65, 18). *Peserta diagihkan kepada tiga kumpulan mengikut tahap kecerdasan iaitu kecerdasan rendah, kecerdasan sederhana dan kecerdasan tinggi di mana* 20% *daripada peserta diletakkan di bawah kumpulan pertama,* 65% *pada kumpulan kedua dan* 15% *pada kumpulan ketiga. Apakah skor yang membezakan setiap kumpulan kecerdasan antara satu sama lain?*

[4 marks]
[4 *markah*]

Answer / *Jawapan*:

25

4

END OF QUESTION

KERTAS SOALAN TAMAT