

**SULIT**

Form four  
Additional Mathematics  
Paper 1  
2011  
2 hours



3472/1

Nama Calon : .....

Tingkatan : .....

**PEPERIKSAAN SELARAS AKHIR TAHUN  
SEKOLAH-SEKOLAH MENENGAH NEGERI MELAKA**

**ADDITIONAL MATHEMATICS**

Paper 1  
2 hours

**JANGAN BUKA KERTAS SOALAN INI  
SEHINGGA DIBERITAHU**

1. *Kertas soalan ini mengandungi 25 soalan.*
2. *Jawab semua soalan.*
3. *Bagi setiap soalan berikan SATU jawapan sahaja.*
4. *Jawapan hendaklah ditulis pada ruang yang disediakan dalam kertas soalan.*
5. *Tunjukkan langkah-langkah penting dalam kerja mengira anda. Ini boleh membantu anda untuk mendapatkan markah.*
6. *Sekiranya anda hendak menukar jawapan. Batalkan kerja mengira yang telah dibuat. Kemudian tuliskan jawapan yang baru.*
7. *Rajah yang mengiringi soalan ini tidak dilukiskan mengikut skala kecuali dinyatakan.*
8. *Markah yang diperuntukkan bagi setiap soalan atau ceraihan soalan ditunjukkan dalam kurungan.*
9. *Satu senarai rumus disediakan di halaman 2 hingga 3.*
10. *Buku sifir matematik empat angka disediakan.*
11. *Penggunaan kalkulator saintifik yang tidak boleh diprogramkan adalah dibenarkan.*
12. *Kertas soalan ini hendaklah diserahkan pada akhir peperiksaan.*

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

Kertas soalan ini mengandungi 18 halaman bercetak

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<http://tutormansor.wordpress.com/>

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

Rumus-rumus berikut boleh digunakan untuk membantu anda menjawab soalan. .  
Simbol-simbol yang diberi adalah yang biasa digunakan.

## ALGEBRA

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

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

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

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

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

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

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

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

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

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

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

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

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

## CALCULUS

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

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

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

4. Area under a curve

$$= \int_a^b y \, dx \text{ or}$$

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

5. Volume generated

$$= \int_a^b \pi y^2 \, dx \text{ or } \int_a^b \pi x^2 \, dy$$

## GEOMETRY

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

2. Midpoint

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

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

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

5. A point dividing a segment of a line

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

6. Area of a triangle =

$$\frac{1}{2} |(x_1 y_2 + x_2 y_3 + x_3 y_1) - (x_2 y_1 + x_3 y_2 + x_1 y_3)|$$

## STATISTICS

$$1 \quad \bar{x} = \frac{\sum x}{N}$$

$$2 \quad \bar{x} = \frac{\sum fx}{\sum f}$$

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

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

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

$$6 \quad I = \frac{P_1}{P_0} \times 100$$

$$7 \quad \bar{I} = \frac{\sum w_1 I_1}{\sum w_1}$$

$$8 \quad {}^n P_r = \frac{n!}{(n-r)!}$$

$$9 \quad {}^n C_r = \frac{n!}{(n-r)!r!}$$

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

$$11 \quad p(X=r) = {}^n C_r p^r q^{n-r}, \quad p + q = 1$$

$$12 \quad \text{Min(mean)} = np$$

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

$$14 \quad z = \frac{x - \mu}{\sigma}$$

$$\bar{x} = \frac{\sum x}{N}$$

## TRIGONOMETRY

$$1 \quad \text{Arc length} = r\theta, \quad s = r\theta$$

$$2 \quad \text{Area of a sector} = \frac{1}{2} r^2 \theta = \frac{1}{2} r^2 \frac{s}{r} = \frac{1}{2} r s$$

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

$$4 \quad \sec^2 A = \frac{1 + \tan^2 A}{1}$$

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

$$7 \quad \cos 2A = \frac{1 - \tan^2 A}{1 + \tan^2 A} = \frac{1 - \sin^2 A}{1 + \sin^2 A} = \frac{2 \cos^2 A - 1}{2 \cos^2 A} = 1 - 2 \sin^2 A$$

$$8 \quad \tan 2A = \frac{2 \tan A}{1 - \tan^2 A}$$

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

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

$$11 \quad \tan(A \pm B) = \frac{\tan A \pm \tan B}{1 \mp \tan A \tan B}$$

$$12 \quad \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

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

$$14 \quad \text{Area of triangle} = \frac{1}{2} ab \sin C$$

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

1.

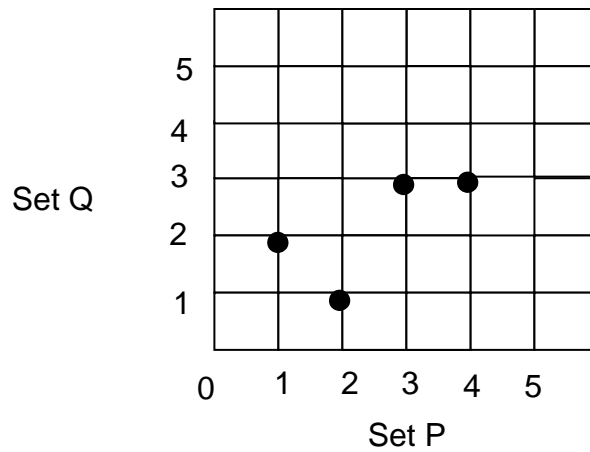


Diagram 1  
Rajah 1

Diagram 1 shows the relation between set P and set Q. State  
*Rajah menunjukkan hubungan di antara set P dan set Q . Nyatakan*

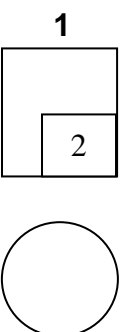
- ( a ) the image of 2  
*imej bagi 2*
  
- ( b ) the type of relation  
*Jenis hubungan itu*

[ 2 marks ]

Answer :

( a )

( b )



2. Given  $f : x \rightarrow 4x + 3$  and  $f(a) = a$ , where  $a$  is a constant.

Find

*Diberi  $f : x \rightarrow 4x + 3$  dan  $f(a) = a$ , dengan keadaan  $a$  adalah pemalar*

*Cari*

(a) the value of  $a$   
*nilai  $a$*

(b)  $f^{-1}(2)$

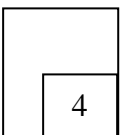
[ 4 marks ]

Answer :

(a)

(b)

**2**



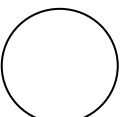
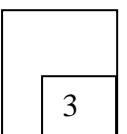
3. Given that  $f(x) = |2x - 3|$ , find the values of  $x$  if  $f(x) = 1$ .

*Diberi  $f(x) = |2x - 3|$ , cari nilai-nilai  $x$  jika  $f(x) = 1$*

[ 3 marks ]

Answer :

**3**

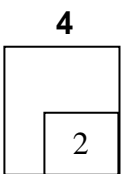


4. Form the quadratic equation which has roots -2 and 6.

*Bentukkan persamaan kuadratik yang mempunyai punca-punca -2 dan 6.*

[ 2 marks ]

Answer :

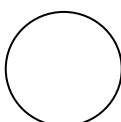
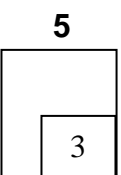


5. Solve the equation  $(x - 1)^2 = 7$  . Give your answer correct to four significant figures.

*Selesaikan persamaan kuadratik  $(x - 1)^2 = 7$  . Beri jawapan anda betul kepada empat angka bererti.*

[ 3 marks ]

Answer :



6. The quadratic function  $f(x) = -2x^2 + px + q$ , where  $p$  and  $q$  are constant, has a maximum point at  $(1, 8)$

*Fungsi kuadratik  $f(x) = -2x^2 + px + q$ , dengan keadaan  $p$  dan  $q$  ialah pemalar mempunyai titik maksimum  $(1, 8)$*

- (a) State the equation of the axis of symmetry  
*Nyatakan persamaan paksi simetri*
- (b) Find the value of  $p$  and of  $q$   
*Cari nilai bagi  $p$  dan  $q$*

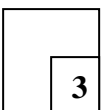
[ 3 marks ]

Answer :

a)

b)

6



- 
7. Find the range the values of  $p$  if the quadratic equation

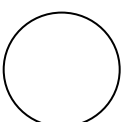
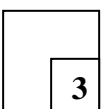
$2x^2 + x = 5 + p$  has two different roots

*Carikan julat nilai  $p$  jika persamaan kuadratik  $2x^2 + x = 5 + p$  mempunyai dua punca yang berbeza*

[ 3 marks ]

Answer :

7



8. Diagram 8 shows part of the graph of function  $y = (x - k)^2 + 1$ , where  $k$  is a constant.

Rajah 8 menunjukkan sebahagian daripada graf bagi fungsi kuadratik  $y = (x - k)^2 + 1$ , dengan keadaan  $k$  ialah pemalar.

Find

Cari

- (a) the value of  $k$   
*nilai  $k$*
- (b) the equation of axis of symmetry  
*persamaan paksi simetri*
- (c) the coordinates of minimum turning point.  
*koordinat minimum titik pusingan*

[ 4 marks ]

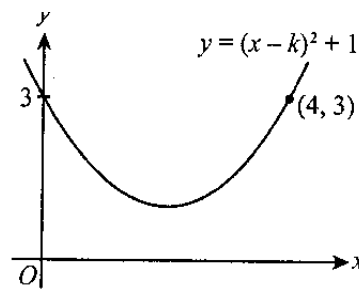
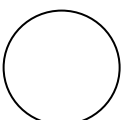


Diagram 8 / Rajah 8

Answer : a)

b)

c)



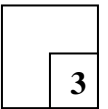


9. Given that  $11x + 4 > 3x^2$ . Find the range values of  $x$   
*Diberi  $11x + 4 > 3x^2$ , cari julat nilai-nilai  $x$*

[ 3 marks ]

Answer :

9

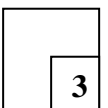


10. Given that  $\log_3 P - 2 = \log_9 R$ , express  $R$  in terms of  $P$   
*Diberi  $\log_3 P - 2 = \log_9 R$ , ungkapkan  $R$  dalam sebutan  $P$*

[ 3 marks ]

Answer :

10

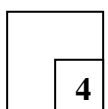


11. Given that  $\log_m 2 = p$  and  $\log_m 3 = r$ , express  $\log_m \left(\frac{27m}{4}\right)$  in terms of  $p$  and  $r$ .  
*Diberi  $\log_m 2 = p$  dan  $\log_m 3 = r$ , ungkapkan  $\log_m \left(\frac{27m}{4}\right)$  dalam sebutan  $p$  dan  $r$ .*

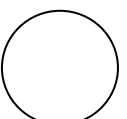
[ 4 marks ]

Answer:

11



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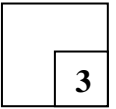
12. Solve the equation  $5^{x+2} + 5^{x-1} = 126$

*Selesaikan persamaan  $5^{x+2} + 5^{x-1} = 126$*

[ 3 marks ]

Answer:

12



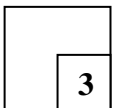
13. Solve the equation  $2 + \log_3(x-1) = \log_3 x$

*Selesaikan persamaan  $2 + \log_3(x-1) = \log_3 x$*

[ 3 marks ]

Answer:

13



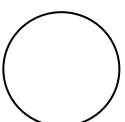
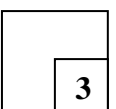
14. Find the equation of the normal to the curve  $y = x^2 - 5x - 8$  at the point (1,-12)

*Cari persamaan bagi garis normal kepada lengkung  $y = x^2 - 5x - 8$  pada titik (1,-12)*

[ 3 marks ]

Answer:

14



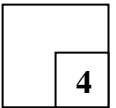
15. The point  $A(7,7)$ ,  $B(m,3)$  and  $C(4,-2)$  are the vertices of a triangle, where  $m$  is an integer. Given the area of the triangle is  $21\text{unit}^2$ , find the value of  $m$ .

*Titik-titik  $A(7,7)$ ,  $B(m,3)$  dan  $C(4,-2)$  ialah bucu-bucu sebuah segitiga, dengan keadaan  $m$  ialah integer. Diberi luas segi tiga ialah  $21\text{unit}^2$ , cari nilai  $m$ .*

[ 4 marks ]

Answer:

15



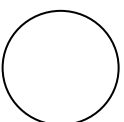
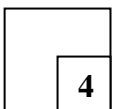
16. Given point  $C(8,10)$  divides the line segment joining  $A(p,4)$  and  $B(5,q)$  internally in the ratio  $AC : CB = 2:3$ . Find the values of  $p$  and  $q$ .

*Diberi titik  $C(8,10)$  membahagi garis yang menyambungkan  $A(p,4)$  dan  $B(5,q)$  mengikut kadar  $AC : CB = 2:3$ . Cari nilai bagi  $p$  dan  $q$ .*

[4 marks]

Answer:

16



17. A set of six numbers has a mean of 10.

*Satu set enam nombor mempunyai minnya 10.*

a) Find  $\sum x$

*Cari  $\sum x$*

b) when a number  $m$  is added to this set, the new mean is 12. Find the value of  $m$ .

*Bila satu nombor  $m$  ditambah kepada set itu, min barunya menjadi 12. Cari nilai bagi  $m$ .*

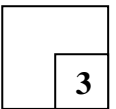
[3 marks]

Answer:

a)

b)

17



18. A set of eight numbers has the sum of the numbers is 96 and the sum of squares of the numbers 1600.

*Satu set yang mengandungi lapan nombor mempunyai jumlah nombor-nombor itu ialah 96 dan jumlah kuasa dua nombor-nombor itu ialah 1600*

Find

*Cari*

a) the mean

*min*

b) the standard deviation

*sisihan piawai*

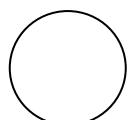
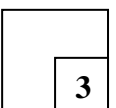
[3 marks]

Answer:

a)

b)

18



19. The mean of a set of numbers  $m-2$ ,  $m+2$ ,  $2m-2$ ,  $2m+4$  and  $3m-1$  is 11.

*Min bagi satu set nombor  $m-2$ ,  $m+2$ ,  $2m-2$ ,  $2m+4$  dan  $3m-1$  ialah 11.*

Find

*Cari*

a) the value of  $m$

*nilai bagi  $m$*

b) the variance of the set of numbers

*varians bagi set nombor-nombor itu*

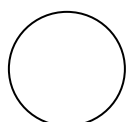
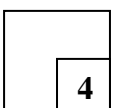
[4 marks]

Answer:

a)

b)

19



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20.

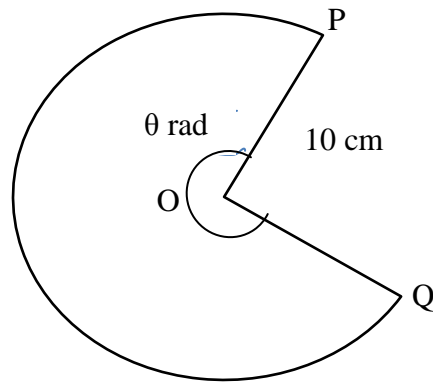


Diagram 20/ Rajah 20

The diagram 20 shows a major sector POQ with centre O and radius of 10 cm. Given the area of sector is  $210 \text{ cm}^2$ .

*Rajah 20 menunjukkan sektor major POQ dengan O sebagai pusat bulatandan berjajari 10 cm. Diberi luas sektor itu ialah  $210 \text{ cm}^2$ .*

Find

*Cari*

a) the value of  $\theta$

*nilai  $\theta$*

b) perimeter in cm of the major sector

*perimeter major sector dalam cm*

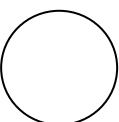
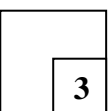
[ 3 marks ]

Answer:

a)

b)

20



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21.

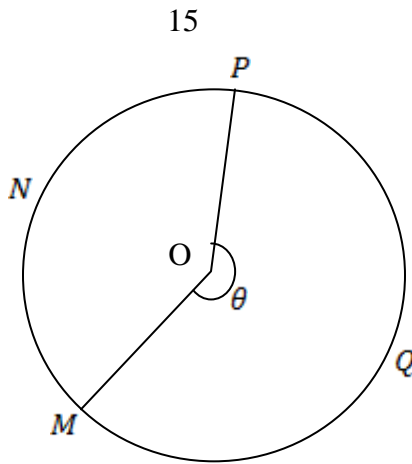


Diagram 21/ *Rajah 21*

Diagram 21 shows a circle, with centre O and a radius of 10 cm. If the length of the minor arc MNP is 21 cm, find

*Rajah 21 menunjukkan sebuah bulatan berpusat O dan berjejari 10 cm. Jika panjang lengkok minor MNP ialah 21 cm, cari*

- the value of  $\theta$   
*nilai  $\theta$*
- the length of a major arc MQP.  
*panjang lengkok major MQP.*

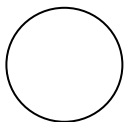
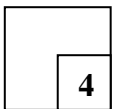
[ 4 marks ]

Answer:

a)

b)

21



[ Lihat sebelah

**3472/1**  
**SULIT**

22.

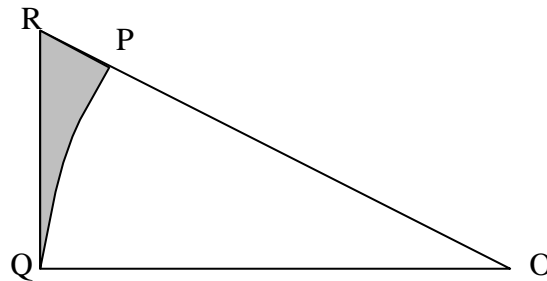


Diagram 22/Rajah 22

Diagram 22 shows  $\triangle OQR$  that has a right angle at Q and OPQ is sector of a circle, with centre O, such that  $OQ = 15$  cm and  $\angle POQ = 0.49$  radians.

*Rajah 22 menunjukkan  $\triangle OQR$  yang mempunyai sudut tegak di Q dan OPQ adalah sektor sebuah bulatan, berpusat O, di mana  $OQ = 15$  cm dan  $\angle POQ = 0.49$  radian.*

Find

*Cari*

- a) the length of QR  
*panjang QR,*
- b) the perimeter of shaded region.  
*Perimeter kawasan berlorek.*

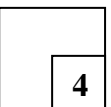
[ 4 marks ]

Answer:

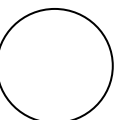
a)

b)

21



[ Lihat sebelah





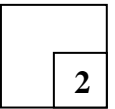
23. Given  $y = \frac{3}{2}u^4$ , where  $u = 4x^2 - 1$ , find  $\frac{dy}{dx}$  in terms of  $x$ .

Diberi  $y = \frac{3}{2}u^4$ , dengan  $u = 4x^2 - 1$  keadaa cari  $\frac{dy}{dx}$  dalam sebutan  $x$ .

[ 2 marks ]

Answer:

23



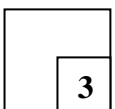
24. Given  $f(x) = 2x^3(7 - 6x)^2$  find  $f'(2)$

Diberi  $f(x) = 2x^3(7 - 6x)^2$  cari  $f'(2)$

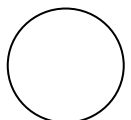
[ 3 marks ]

Answer :

24



[ Lihat sebelah



25. Given that  $y = 3x^2 + 2x - 5$ ,

*Diberi  $y = 3x^2 + 2x - 5$*

a) find the value of  $\frac{dy}{dx}$  when  $x = 2$ .

*Cari nilai bagi  $\frac{dy}{dx}$  bila  $x = 2$*

b) express the approximate change in  $y$  in terms of  $p$ , when  $x$  changes from 2 to  $2 + p$  where the value of  $p$  is small.

*Ungkapkan dalam sebutan  $p$ , perubahan hamper dalam nilai  $y$  apabila 2 kepada  $2 + p$ , dengan keadaan  $p$  ialah satu nilai kecil.*

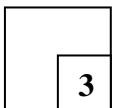
[ 3 marks ]

Answer:

a)

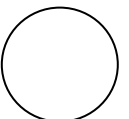
b)

25



**END OF QUESTION PAPER / KERTAS SOALAN TAMAT**

[ Lihat sebelah



3472/1  
Form 4  
Additional Mathematics  
Paper 1  
2011



**PEPERIKSAAN SELARAS AKHIR TAHUN  
SEKOLAH-SEKOLAH MENENGAH NEGERI MELAKA**

**Kelolaan**

**PEJABAT PELAJARAN DAERAH  
JASIN \* ALOR GAJAH \* MELAKA TENGAH**

**Dengan kerjasama :**

**JABATAN PELAJARAN NEGERI MELAKA  
TINGKATAN 4  
TAHUN 2011**

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**ADDITIONAL MATHEMATICS**

**Paper 1**

**MARKING SCHEME**

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**This marking scheme consists of 5 printed pages**

Number	Solution and marking scheme	Submarks	Full marks
1	a) 1 b) Many to one	1 1	2
2	a) $a = -1$ $-3 = 4a - a$ b) $-\frac{1}{4}$ $f^{-1}(x) = \frac{x-3}{4}$	2 B1 2 B1	4
3	$x = 2$ and $x = 1$ $x = 2$ or $x = 1$ $f(x) = 2x - 3$ or $f(x) = -2x + 3$	3 B2 B1	3
4	$x^2 - 4x - 12 = 0$ SOR = $-2+6 = 4$ , POR = $-2(6) = -12$	2 B1	2
5	$x = 3.646$ and $x = -1.646$ $x = 3.646$ or $x = -1.646$ $a = 1, b = -2, c = -6$ or $\frac{-(-2) \pm \sqrt{(-2)^2 - 4(1)(-6)}}{2(1)}$	3 B2 B1	3
6	a) $x = 1$ b) $p = -4$ $q = -10$	1 1 1	3
7	$p > -\frac{41}{8}$ $1^2 - 4(2)[-5 + p] > 0$ $2x^2 + x - (5 + p) = 0$ OR $a=2, b=1, c=-(5+p)$	3 B2 B1	3
8	(a) $k = 2$ (b) $x = 2$ (c) $(2, 1)$	B1 B1 B2	4

9	$-\frac{1}{3} < x < 4$ $(3x+1)(x-4) < 0$ $3x^2 - 11x - 4 < 0$	3 B2 B1	3
10	$R = \frac{P^2}{81}$ $2\log_3 P - 4 = \log_3 R$ $\text{Log}_3 \left(\frac{P^2}{81}\right) = \log_3 R$ $\text{Log}_3 P - 2 = \frac{\log_3 R}{\log_3 9} = \frac{\log_3 R}{2}$	B3 B2 B1	3
11.	$3r + 1 - 2p$ $3 \log_m 3 + 1 - 2 \log_m 2$ $\log_m 3^3 + 1 - \log_m 2^2$ $\log_m 27 + \log_m m - \log_m 4$	4 B3 B2 B1	4
12.	$X = 1$ $5^x = 5$ $5^x (5^2) + 5^x \left(\frac{1}{5}\right) = 126$ $\text{OR } 5^x \left(25 + \frac{1}{5}\right) = 126$	3 B2 B1	3
13.	$X = \frac{9}{8}$ $9x - 9 = x$ $\log_3 3^2 (x-1) = \log_3 x$ $\text{OR } 2 \log_3 3 + \log_3 (x-1) = \log_3 x$	3 B2 B1	3
14.	$3y = x - 35 \text{ or } x - 3y - 37 = 0$ $y + 12 = \frac{1}{3}(x+1)$ $\frac{dy}{dx} = -3 \text{ OR } m = \frac{1}{3}$	3 B2 B1	3

15.	$m = 1$ $51 - 9m = 42$ or $51 - 9m = -42$ $ 51 - 9m  = 42$ $ 21 - 2m + 28 - 7m - 12 + 14  = 42$	4 B3 B2 B1	4
16	$p = 10$ and $q = 19$ $p = 10$ or $q = 19$ $\frac{3p+10}{5} = 8$ atau $\frac{12+2q}{5} = 10$ $\left(\frac{3p+2(5)}{2+3}, \frac{3(4)+2q}{2+3}\right) = (8,10)$	4 B3 B2 B1	4
17	a) 60 b) $m = 24$ $\frac{\sum x+m}{7} = 12$	1 2 B1	3
18	a) $\bar{x} = 12$ b) $\sigma = 7.483$ $\sigma^2 = \frac{1600}{8} - 12^2$	1 B2 B1	3
19	a) $m = 6$ $\frac{(m-2)+(m+2)+(2m-2)+(2m+4)+(3m-1)}{5} = 11$ b) $\sigma^2 = 24$ $\bar{x} = 11$ atau $\sum x^2 = 725$ atau $\frac{725}{5} - 11^2$	2 B1 2 B1	4
20	a) $\theta = 4.2 \text{ rad}$ b) 62cm $10 + 10 + 10(4.2)$	1 2 B1	3
21	a) $\theta = 4.183$	2	4

	$\frac{21}{10} = 2\pi - \theta$ b)41.83 10(4.183)	B1  2 B1	
22	a)8 cm $\frac{QR}{15} = \tan 0.49$ b)17.35 15(0.49) or RP=2cm	2 B1  2 B1	4
23	$48x(4x^2 - 1)^3$ $4(4x^2 - 1)^3$ or $8x$	2 B1	2
24	-3120 $6x^2(7 - 6x)(7 - 10x)$ $6x^2(7 - 6x)^2 - 24x^3(7 - 6x)$	3 B2 B1	3
25	a)14 b)14p $\delta x = p$	1 2 B1	3