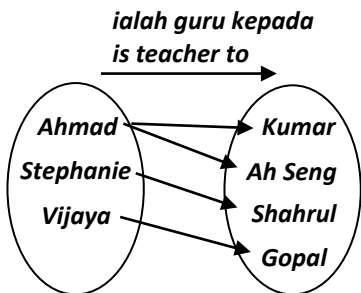


**SKEMA JAWAPAN**  
**PEPERIKSAAN PERCUBAAN SPM KERTAS 1**  
**TAHUN 2019**

*cikgujep.com*  
*blog matematik tambahan*

NO. SOALAN	JAWAPAN	SUB MARKAH	MARKAH PENUH
1	<p><math>p = 6</math></p> <p>B1 : 1, 2, 3, 6, 9, 11, 12 atau setara</p>	2	2
2	<p><math>\frac{3}{4}, \frac{1}{4}</math></p> <p>B1: <math>(pxp) + (1-p)(1-p) = \frac{5}{8}</math> atau setara</p>	2	2
3	<p>12012</p> <p>B2 : <math>{}^2C_2 {}^{11}C_3 \times {}^8C_6 \times {}^2C_2 + {}^7C_5 \times {}^2C_2 {}^{11}C_4 \times {}^2C_2 + {}^5C_5 \times {}^{11}C_6 \times {}^2C_2</math></p> <p>B1: <math>{}^2C_2 {}^{11}C_3 \times {}^8C_6 \times {}^2C_2</math> atau <math>{}^7C_5 \times {}^2C_2 {}^{11}C_4 \times {}^2C_2</math> atau <math>{}^5C_5 \times {}^{11}C_6 \times {}^2C_2</math></p>	3	3
4	<p><math>X = 12.81</math></p> <p>B3 : 62.81</p> <p>B2 : <math>\frac{X-50}{10}</math></p> <p>B1 : <math>(X &gt; \frac{X-\mu}{\sigma}) = 0.1</math></p>	4	4
5	<p><math>4x - 1</math></p> <p>B2: <math>\frac{dy}{dx} = \lim_{\delta x \rightarrow 0} \frac{\delta y}{\delta x} \cdot (4x + 2\delta x - 1)</math></p> <p>B1: <math>y + \delta y = 2(x + \delta x)^2 - (x + \delta x) + 1</math></p>	3	3
6	<p><math>P = 5</math></p> <p>B2: <math>\frac{1}{3p} = \frac{1}{15}</math></p> <p>B1: <math>y = \frac{(px-4)^3}{3(p)} + c</math></p>	3	3
NO.	JAWAPAN	SUB MARKAH	MARKAH

SOALAN			PENUH
7	a) $P = 80$ $B1: -\frac{1}{4}x^2 + 40 = 0$ $x = 40, -40$  b) 40 $B1: -\frac{1}{4}x^2 + 40 = 30$ $x = 20, -20$	2          2	4
8	$x = 4, -\frac{3}{2}$  $B2: x = 4 \text{ atau } x = -\frac{3}{2}$  $B1: \left(x - \frac{5}{4}\right)^2 = 6 + \frac{25}{4}$	3	3
9	$h = 2, h = 12$  $B2: h^2 - 14h + 24 = 0$  $B1: \frac{7-3}{4-h} \times \frac{3-(-1)}{h-10} = -1$	3	3
10	a) $2a$  $B1: AB + BD = AD, AD = 2BC$  b) $2b$  $B1: 2a + 2(-a + b)$	2          2	4
11	<p style="text-align: center;"><i>ialah guru kepada</i> <i>is teacher to</i></p> 	2	2
NO.	JAWAPAN	SUB	MARKAH

SOALAN		MARKAH	PENUH
12	$a = 2, b = -1$ B2 : $a = 2$ atau $b = -1$ B1 : $a(2^2) + 2a - 7 = 5$ atau $2(-1)^2 + 2(2) - 7 = b$	3	3
13	$k = \frac{h-4}{3}$ B2: $3k + 4 = h$ B1: $fg(x) = k(4x + 3) + 4$	3	3
14	$A=3$ $n=1$ B3: $a = 3$ atau $n = 1$ B2: $3^{n+1}=3^2$ B1: $\frac{1}{a} = \frac{1}{3}$ @	4	4
15	$M=2N^{1/2}$ B2: $\log_2 \frac{M^2}{N} = 4$ B1: $\log_2 M - \frac{\log_2 N}{2} = 2$	3	3
16	$m = 3$ dan $n = 6$ B2 : $m = 3$ atau $n = 6$ B1: $m = -3(5) + 18$ atau $0 = -3n + 18$	3	3
17	$p = 7$ DAN $q = 2$ B2 : $p = 7$ atau $q = 2$ B1 : $(p + q + 6)/p = \frac{1}{p} + q$ @ $(4q - 6)/p = \frac{q}{p}$	3	3
18	$m = 3$ dan $n = -17$ B2 : $m = 3$ atau $n = -17$ B1 : $2m = 6$ atau $m^2 - n = -8 - 2n$	3	3

NO. SOALAN	JAWAPAN	SUB MARKAH	MARKAH PENUH
19	3.286k B3: $1.75k + 1.5356k$ atau setara B2: Perentas $AB = 2k \sin\left(\frac{1.75 \times 180}{2(3.142)}\right)$ atau setara B1: Lengkuk BCA = 1.75k	4	4
20	$x = 7.24, 82.76, 187.24, 262.76$ B3 : $2x = 14.48, 165.52, 374.48, 525.52$ B2 : $2 \sin 2x = \frac{1}{2}$ atau setara B1 : $y = 2 \sin 2x$	4	4
21	168 B3: $24 + 2 \left[ 24 \left(\frac{3}{4}\right)^1 + 24 \left(\frac{3}{4}\right)^2 + 24 \left(\frac{3}{4}\right)^3 + \dots \right]$ B2: $a = 24$ dan $r = \frac{3}{4}$ B1: $a = 24$ atau $r = \frac{3}{4}$	4	4
22	$a = -13, d = 12$ B2: $a = -13$ atau $d = 12$ B1: $T_6 = a + 5d = 47$ atau $S_{10} = \frac{10}{2} (2a + 9d) = 410$	3	3
23	a) $p = 0.000216, q = 0.000000216$ b) 0.001 B1: $\frac{0.000216}{0.216}$	1  2	3

NO. SOALAN	JAWAPAN	SUB MARKAH	MARKAH PENUH												
24	<table border="1" data-bbox="336 427 1002 555"> <thead> <tr> <th>x</th> <th>0</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>P(X=x)</td> <td>1/16</td> <td>1/4</td> <td>3/8</td> <td>1/4</td> <td>1/16</td> </tr> </tbody> </table> <p data-bbox="328 622 523 656">B3: 4 nilai betul</p> <p data-bbox="328 689 523 723">B2: 3 nilai betul</p> <p data-bbox="328 757 788 790">B1 : <math>{}^4C_r (1/2)^r (1/2)^{4-r}</math>, <math>r = 0,1,2,3,4</math></p>	x	0	1	2	3	4	P(X=x)	1/16	1/4	3/8	1/4	1/16	4	4
x	0	1	2	3	4										
P(X=x)	1/16	1/4	3/8	1/4	1/16										
25	<p data-bbox="328 831 549 864">a = -3 dan b = 4</p> <p data-bbox="328 891 619 925">B2 : a = -3 atau b = 4</p> <p data-bbox="328 952 612 985">B1 : <math>a\underline{i} + b\underline{j} + 3\underline{i} - 4\underline{j} = 0</math></p>	3	3												