Jawapan

Praktis 13

Praktis Formatif

1 P(mengeluarkan sekeping kad yang berhuruf E)
P(*drawing a card of letter E*)
$= \frac{62}{120}$
$= \frac{31}{60}$
Jawapan/*Answer*: **C**

2 (a) Bilangan kali mendapat gambar = 8
Number of times of getting head = 8
Kebarangkalian eksperimen untuk mendapat gambar
Experimental probability of getting head
$= \frac{8}{20}$
$= \frac{2}{5}$

(b) Bilangan kali mendapat angka = 12
Number of times of getting tail = 12
Kebarangkalian eksperimen untuk mendapat angka
Experimental probability of getting tail
$= \frac{12}{20}$
$= \frac{3}{5}$

3

Warna ***Colour***	Merah *Red*	Kuning *Yellow*	Hijau *Green*
Bilangan kali ***Number of times***	5	3	4

(a) P(mendapat sekeping kad merah)
P(*getting a red card*)
$= \frac{5}{12}$

(b) P(mendapat sekeping kad kuning)
P(*getting a yellow card*)
$= \frac{3}{12}$
$= \frac{1}{4}$

(c) P(mendapat sekeping kad hijau)
P(*getting a green card*)
$= \frac{4}{12}$
$= \frac{1}{3}$

4 (a) (i) P(mendapat A)
P(*getting* A)
$= \frac{625}{2\,500}$
$= 0.2500$

(ii) P(mendapat 7)/P(*getting* 7)
$= \frac{620}{2\,500}$
$= 0.2480$

(iii) P(mendapat W)/P(*getting* W)
$= \frac{627}{2\,500}$
$= 0.2508$

(iv) P(mendapat 8)/P(*getting* 8)
$= \frac{628}{2\,500}$
$= 0.2512$

(b) P(mendapat A)/P(*getting* A)
$= \frac{1}{4}$
$= 0.25$
P(mendapat 7)/P(*getting* 7)
$= \frac{1}{4}$
$= 0.25$
P(mendapat W)/P(*getting* W)
$= \frac{1}{4}$
$= 0.25$
P(mendapat S)
P(*getting* S)
$= \frac{1}{4}$
$= 0.25$

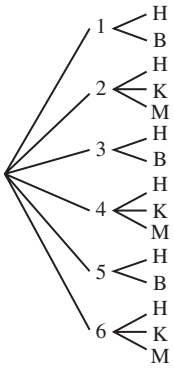
5 Ruang sampel/*Sample space*
= {(H, H), (H, M), (M, H), (M, M)}
Jawapan/*Answer*: **D**

6 (a) Ruang sampel = {(Angka, Angka),
(Angka, Gambar),
(Gambar, Angka),
(Gambar, Gambar)}
Sample space = {(*Tail*, *Tail*), (*Tail*, *Head*),
(*Head*, *Tail*), (*Head*, *Head*)}

(b) (i) A = {(Angka, Gambar), (Gambar, Angka)}
{(*Tail*, *Head*), (*Head*, *Tail*)}

(ii) B = {(Angka, Angka), (Gambar, Gambar)}
{(*Tail*, *Tail*), (*Head*, *Head*)}

7 (a)



(b) Ruang sampel/*Sample space*
= {(1, H), (1, B), (2, H), (2, K), (2, M), (3, H), (3, B), (4, H), (4, K), (4, M), (5, H), (5, B), (6, H), (6, K), (6, M)}

(c) (i) A = {(1, B), (3, B), (5, B)}
(ii) B = {(2, K), (4, K), (6, K)}
(iii) C = {(1, H), (2, H), (3, H), (4, H), (5, H), (6, H)}

8 (a) $n(S)$ = 10 + 15 + 20 + 30
= 75

(i) P(sekeping setem Malaysia dipilih)
P(*a Malaysia stamp is chosen*)
$= \frac{10}{75}$
$= \frac{2}{15}$

(ii) P(sekeping setem Korea dipilih)
P(*a Korea stamp is chosen*)
$= \frac{15}{75}$
$= \frac{1}{5}$

(iii) P(sekeping setem Australia dipilih)
P(*an Australian stamp is chosen*)
$= \frac{20}{75}$
$= \frac{4}{15}$

(iv) P(sekeping setem Singapura dipilih)
P(*a Singapore stamp is chosen*)
$= \frac{30}{75}$
$= \frac{2}{5}$

(b) (i) P(sekeping setem Malaysia dipilih)
P(*a Malaysia stamp is chosen*)
$= \frac{2}{15}$ [✗]

(ii) P(sekeping setem Korea dipilih)
P(*a Korea stamp is chosen*)
$= \frac{1}{5}$ [✓]

(iii) P(sekeping setem Australia dipilih)
P(*an Australian stamp is chosen*)
$= \frac{4}{15}$ [✓]

(iv) P(sekeping setem Singapura dipilih)
P(*a Singapore stamp is chosen*)
$= \frac{2}{5}$ [✗]

9 $n(S)$ = 24 + 32
= 56

(a) P(memilih sebiji durian Musang King)
P(*choosing a Musang King durian*)
$= \frac{24}{56}$
$= \frac{3}{7}$

(b) P(memilih sebiji durian D24)
P(*choosing a* D24 *durian*)
$= \frac{32}{56}$
$= \frac{4}{7}$

10

Peristiwa ***Event***	**Kebarangkalian** ***Probability***
Cerah *Sunny*	$\frac{4}{15}$
Mendung *Cloudy*	$\frac{1}{5}$
Ribut Petir *Stormy*	$\frac{1}{6}$
Hujan *Rainy*	$\frac{7}{30}$
Berangin *Windy*	$\frac{2}{15}$

11 (a) P(menggunakan 2 jam hingga 2.4 jam)
P(*using* 2 *hours until* 2.4 *hours*)
$= \frac{6}{36}$
$= \frac{1}{6}$ [✓]

(b) P(menggunakan kurang daripada 2 jam)
P(*using less than* 2 *hours*)
$= \frac{5 + 8}{36}$
$= \frac{13}{36}$ [✗]

(c) P(menggunakan sekurang-kurangnya 2.5 jam)
P(*using at least* 2.5 *hours*)
$= \frac{10 + 7}{36}$
$= \frac{17}{36}$ [✓]

12 S = {1, 2, 3, 4, 5, 6}
M = {2, 3, 5}
M' = {1, 4, 6}
Jawapan/*Answer:* **C**

13 A' = {A, B, D, I, O, R, U}
B' = {B, D, G, K, N, R}
C' = {A, B, G, N, U}

14 (a) P(Jamal tidak membeli sepasang selipar berwarna biru)
P(*Jamal is not buying a pair of blue colour slippers*)

$= 1 - \frac{5}{7}$

$= \frac{2}{7}$

(b) P(Asmah tidak memenangi suatu hadiah dalam cabutan bertuah)
P(*Asmah is not winning a prizse in a lucky draw*)

$= \boxed{1} - \frac{4}{23}$

$= \boxed{\frac{19}{23}}$

(c) P(Ramy tidak menerima bayaran bonus 2 bulan gaji dalam tahun ini)
P(*Ramy does not receive a bonus payment of 2-month salary in this year*)

$= 1 - \boxed{0.384}$

$= \boxed{0.616}$

(d) P(Wai Meng tidak skor A dalam Matematik dalam peperiksaan akhir tahun)
P(*Wai Meng does not score A in Mathematics in the final year examination*)

$= 1 - \boxed{0.9025}$

$= \boxed{0.0975}$

15

	Lelaki *Male*	Perempuan *Female*	Jumlah *Total*
Memakai cermin mata ***Wearing spectacles***	2	4	6
Tidak memakai cermin mata ***Not wearing spectacles***	14	16	30
Jumlah ***Total***	16	20	36

(a) P(seorang murid lelaki tidak memakai cermin mata)
P(*a male student is not wearing spectacles*)

$= \frac{14}{36}$

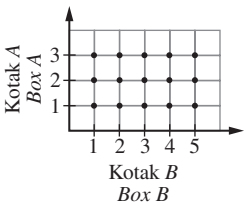
$= \frac{7}{18}$

(b) P(seorang murid tidak memakai cermin mata)
P(*a student is not wearing spectacles*)

$= \frac{30}{36}$

$= \frac{5}{6}$

16 (a)



(b) $S = \{(1, 1), (1, 2), (1, 3), (2, 1), (2, 2), (2, 3), (3, 1), (3, 2), (3, 3), (4, 1), (4, 2), (4, 3), (5, 1), (5, 2), (5, 3)\}$

$n(S) = 15$

(i) A = Peristiwa mendapat dua nombor yang berlainan
A = *Event of getting two different numbers*
$= \{(1, 2), (1, 3), (2, 1), (2, 3), (3, 1), (3, 2), (4, 1), (4, 2), (4, 3), (5, 1), (5, 2), (5, 3)\}$

$n(A) = 12$

$P(A) = \frac{12}{15} = \frac{4}{5}$

(ii) B = Peristiwa mendapat hasil tambah bagi dua nombor bukan 7
B = *Event of getting the sum of two numbers is not 7*
$= \{(1, 1), (1, 2), (1, 3), (2, 1), (2, 2), (2, 3), (3, 1), (3, 2), (3, 3), (4, 1), (4, 2), (5, 1), (5, 3)\}$

$n(B) = 13$

$P(B) = \frac{13}{15}$

Kaedah alternatif
Alternative method
B = Peristiwa mendapat hasil tambah bagi dua nombor ialah 7
B = *Event of getting the sum of two numbers is* 7
$= \{(4, 3), (5, 2)\}$

$n(B) = 2$

$P(B) = \frac{2}{15}$

$P(B') = 1 - P(B)$

$= 1 - \frac{2}{15}$

$= \frac{13}{15}$

17 P(pekerja itu pergi bekerja dengan van)
P(*the worker travels to work by van*)

$= \frac{50}{200} = \frac{1}{4}$

Jawapan/*Answer*: **C**

18 (a) $S = \{(M, B), (M, A), (M, I), (M, K), (A, B), (A, A), (A, I), (A, K), (K, B), (K, A), (K, I), (K, K), (I, B), (I, A), (I, I), (I, K), (N, B), (N, A), (N, I), (N, K)\}$

$n(S) = 20$

(b) (i) A = Peristiwa memilih dua huruf yang sama
A = *Event of choosing two similar letters*
$= \{(A, A), (K, K), (I, I)\}$

$n(A) = 3$

$P(A) = \frac{3}{20}$

(ii) B = Peristiwa memilih dua huruf vokal yang berlainan

B = *Event of choosing two different vowels*

$= \{(A, I), (I, A)\}$

$n(B) = 2$

$P(B) = \frac{2}{20} = \frac{1}{10}$

(iii) C = Peristiwa memilih satu huruf vokal

C = *Event of choosing a vowel*

$= \{(M, A), (M, I), (A, B), (A, K), (K, A), (K, I), (I, B), (I, K), (N, A), (N, I)\}$

$n(C) = 10$

$P(C) = \frac{10}{20}$

$= \frac{1}{2}$

(iv) D = Peristiwa memilih sekurang-kurangnya satu huruf vokal

D = *Event of choosing at least a vowel*

$= \{(M, A), (M, I), (A, B), (A, A), (A, I), (A, K), (K, A), (K, I), (I, B), (I, A), (I, I), (I, K), (N, A), (N, I)\}$

$n(D) = 14$

$P(D) = \frac{14}{20}$

$= \frac{7}{10}$

19 $n(S) = 30$

(a) Harga mod/*Modal price* = RM16.50

A = Peristiwa memilih sebiji tembikai dengan harga mod

A = *Event of choosing a watermelon with the modal price*

$n(A) = 3$

$P(A) = \frac{3}{30}$

$= \frac{1}{10}$

(b) Harga median/*Median price*

$= \frac{x_{15} + x_{16}}{2}$

$= \frac{16.90 + 16.90}{2}$

= RM16.90

B = Peristiwa memilih sebiji tembikai dengan harga median

B = *Event of choosing a watermelon with the median price*

$n(B) = 2$

$P(B) = \frac{2}{30} = \frac{1}{15}$

(c) C = Peristiwa memilih sebiji tembikai dengan harga kurang daripada harga mod

C = *Event of choosing a watermelon with a price less than the modal price*

$n(C) = 11$

$P(C) = \frac{11}{30}$

(d) D = Peristiwa memilih sebiji tembikai dengan harga antara RM17 dengan RM19

D = *Event of choosing a watermelon with a price between* RM17 *and* RM19

$n(D) = 8$

$P(D) = \frac{8}{30} = \frac{4}{15}$

Praktis Sumatif

1 $S = \{x : 12 < x < 40, x \text{ ialah suatu gandaan bagi } 3\}$

$S = \{x : 12 < x < 40, x \text{ is a multiple of } 3\}$

$S = \{15, 18, 21, 24, 27, 30, 33, 36, 39\}$

A = Peristiwa bahawa suatu nombor dengan hasil tambah digit-digit sama dengan 3 dipilih

A = *Event that a number with the sum of digits equal to* 3 *is chosen*

$= \{21, 30\}$

$n(A) = 2$

$n(S) = 9$

$P(A) = \frac{n(A)}{n(S)} = \frac{2}{9}$

Jawapan/*Answer*: **C**

2 $P(M) = \frac{n(M)}{n(S)}$

$\frac{10}{n(S)} = \frac{5}{18}$

$n(S) = 10 \times \frac{18}{5} = 36$

$P(K') = 1 - P(K)$

$= 1 - \frac{n(K)}{n(S)}$

$= 1 - \frac{12}{36}$

$= 1 - \frac{1}{3}$

$= \frac{2}{3}$

Jawapan/*Answer*: **D**

3 Kebarangkalian bahawa petunjuk itu tidak akan berhenti pada sektor yang berlabel 1

Probability that the pointer will not stop in the sectors labelled 1

= 1 – Kebarangkalian bahawa petunjuk itu akan berhenti pada sektor yang berlabel 1

= 1 – *Probability that the pointer will stop in the sectors labelled* 1

$= 1 - \frac{3}{9}$

$= 1 - \frac{1}{3}$

$= \frac{2}{3}$

Jawapan/*Answer*: **C**

4 $P(M) = \frac{n(M)}{n(S)}$

$\frac{n(M)}{60} = \frac{1}{5}$

$n(M) = \frac{1}{5} \times 60$

$= 12$

$n(S) = 60 + x$

$\frac{12}{60 + x} = \frac{1}{8}$

$60 + x = 96$

$x = 36$

Bilangan sudu berwarna kuning yang perlu ditambahkan ialah 36.

Number of yellow spoons that need to be added is 36.

Jawapan/*Answer*: **A**

5 Januari/*January*:

Bilangan unit yang didiami oleh pemilik sendiri = 140

Number of units occupied by owners = 140

Bilangan unit yang disewa

Number of units rented

= 200 – 140

= 60

Februari/*February*:

Bilangan unit yang disewa berpindah keluar = 15

Number of units rented that were moved out = 15

Bilangan unit yang didiami semula oleh pemilik sendiri = 7

Number of units re-occupied by owners = 7

Bilangan unit yang dikosongkan

Number of units that were vacant

= 15 – 7

= 8

Kebarangkalian bahawa unit itu adalah tidak didiami

Probability that the unit is not occupied

$= \frac{8}{200}$

$= \frac{1}{25}$

Jawapan/*Answer*: **A**

6 (a) Ruang sampel/*Sample space*

$= \{(M, M), (M, A), (M, P), (I, M), (I, A), (I, P), (N, M), (N, A), (N, P), (D, M), (D, A), (D, P)\}$

(b) $n(S) = 12$

(i) A = Peristiwa bahawa Izwan dan Norman memilih huruf M

A = *Event that Izwan and Norman choose letter M*

$= \{(M, M)\}$

$n(A) = 1$

$P(A) = \frac{n(A)}{n(S)}$

$= \frac{1}{12}$

(ii) B = Peristiwa bahawa Izwan dan Norman memilih huruf konsonan

B = *Event that Izwan and Norman choose a consonant*

$= \{(M, M), (M, P), (N, M), (N, P), (D, M), (D, P)\}$

$n(B) = 6$

$P(B) = \frac{n(B)}{n(S)}$

$= \frac{6}{12}$

$= \frac{1}{2}$

(iii) C = Peristiwa bahawa Izwan memilih huruf vokal dan Norman memilih huruf konsonan

C = *Event that Izwan chooses a vowel and Norman chooses a consonant*

$= \{(I, M), (I, P)\}$

$n(C) = 2$

$P(C) = \frac{n(C)}{n(S)}$

$= \frac{2}{12}$

$= \frac{1}{6}$

7 (a)

Pusingan kedua / *Second turn*

Pusingan pertama / *First turn*	+	1	5	10	15	20
	1	2	6	11	16	21
	5	6	10	15	20	25
	10	11	15	20	25	30
	15	16	20	25	30	35
	20	21	25	30	35	40

(b) (i) $A = \{(5, 5), (5, 10), (5, 15), (5, 20), (10, 5), (10, 10), (10, 15), (10, 20), (15, 5), (15, 10), (15, 15), (15, 20), (20, 5), (20, 10), (20, 15), (20, 20)\}$

(ii) $B = \{(10, 20), (15, 15), (15, 20), (20, 10), (20, 15), (20, 20)\}$

(c) $n(S) = 25$

$n(A) = 16$

$P(A) = \frac{n(A)}{n(S)}$

$= \frac{16}{25}$

$n(B) = 6$

$P(B) = \frac{n(B)}{n(S)}$

$= \frac{6}{25}$

$P(B') = 1 - P(B)$

$= 1 - \frac{6}{25}$

$= \frac{19}{25}$