

PENYELESAIAN LENGKAP

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 = 10
Number of times of getting head = 10
Kebarangkalian eksperimen untuk mendapat gambar

$$\text{Experimental probability of getting head}$$

$$= \frac{10}{16}$$

$$= \frac{5}{8}$$

- (b) Bilangan kali mendapat angka = 6
Number of times of getting tail = 6
Kebarangkalian eksperimen untuk mendapat angka

$$\text{Experimental probability of getting tail}$$

$$= \frac{6}{16}$$

$$= \frac{3}{8}$$

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)

$$= \frac{625}{2500}$$

$$= 0.2500$$

- (ii) P (mendapat 7)/ P (getting 7)

$$= \frac{620}{2500}$$

$$= 0.2480$$

- (iii) P (mendapat W)/ P (getting W)

$$= \frac{627}{2500}$$

$$= 0.2508$$

- (iv) P (mendapat 8)/ P (getting 8)

$$= \frac{628}{2500}$$

$$= 0.2512$$

- (b) P (mendapat A)/ P (getting A)

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

$$= 0.25$$

$$P(\text{mendapat 7})/P(\text{getting 7})$$

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

$$= 0.25$$

$$P(\text{mendapat W})/P(\text{getting W})$$

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

$$= 0.25$$

$$P(\text{mendapat S})$$

$$P(\text{getting S})$$

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

$$= 0.25$$

- 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)}

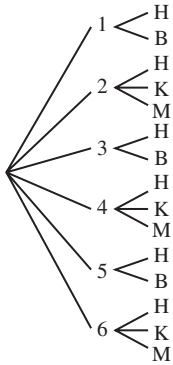
$$\text{Sample space} = \{(Tail, Tail), (Tail, Head),$$

$$(Head, Tail), (Head, Head)\}$$

- (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) $P(\text{sekeping setem Malaysia dipilih})$
 $P(\text{a Malaysia stamp is chosen})$

$$= \frac{10}{75}$$

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

(ii) $P(\text{sekeping setem Korea dipilih})$
 $P(\text{a Korea stamp is chosen})$

$$= \frac{15}{75}$$

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

(iii) $P(\text{sekeping setem Australia dipilih})$
 $P(\text{an Australian stamp is chosen})$

$$= \frac{20}{75}$$

$$= \frac{4}{15}$$

(iv) $P(\text{sekeping setem Singapura dipilih})$
 $P(\text{a Singapore stamp is chosen})$

$$= \frac{30}{75}$$

$$= \frac{2}{5}$$

(b) (i) $P(\text{sekeping setem Malaysia dipilih})$
 $P(\text{a Malaysia stamp is chosen})$

$$= \frac{2}{15} \quad [\times]$$

(ii) $P(\text{sekeping setem Korea dipilih})$
 $P(\text{a Korea stamp is chosen})$

$$= \frac{1}{5} \quad [\checkmark]$$

(iii) $P(\text{sekeping setem Australia dipilih})$
 $P(\text{an Australian stamp is chosen})$

$$= \frac{4}{15} \quad [\checkmark]$$

(iv) $P(\text{sekeping setem Singapura dipilih})$
 $P(\text{a Singapore stamp is chosen})$

$$= \frac{2}{5} \quad [\times]$$

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

(a) $P(\text{memilih sebiji durian Musang King})$
 $P(\text{choosing a Musang King durian})$

$$= \frac{24}{56}$$

$$= \frac{3}{7}$$

(b) $P(\text{memilih sebiji durian D24})$
 $P(\text{choosing a D24 durian})$

$$= \frac{32}{56}$$

$$= \frac{4}{7}$$

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) $P(\text{menggunakan 2 jam hingga 2.4 jam})$
 $P(\text{using 2 hours until 2.4 hours})$

$$= \frac{6}{36}$$

$$= \frac{1}{6} \quad [\checkmark]$$

(b) $P(\text{menggunakan kurang daripada 2 jam})$
 $P(\text{using less than 2 hours})$

$$= \frac{5 + 8}{36}$$

$$= \frac{13}{36} \quad [\times]$$

(c) $P(\text{menggunakan sekurang-kurangnya 2.5 jam})$
 $P(\text{using at least 2.5 hours})$

$$= \frac{10 + 7}{36}$$

$$= \frac{17}{36} \quad [\checkmark]$$

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) $P(\text{Jamal tidak membeli sepasang selipar berwarna biru})$

$P(\text{Jamal is not buying a pair of blue colour slippers})$

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

$$= \frac{2}{7}$$

- (b) $P(\text{Asmah tidak memenangi suatu hadiah dalam cabutan bertuah})$

$P(\text{Asmah is not winning a prize in a lucky draw})$

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

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

- (c) $P(\text{Ramy tidak menerima bayaran bonus 2 bulan gaji dalam tahun ini})$

$P(\text{Ramy does not receive a bonus payment of 2-month salary in this year})$

$$= 1 - 0.384$$

$$= 0.616$$

- (d) $P(\text{Wai Meng tidak skor A dalam Matematik dalam peperiksaan akhir tahun})$

$P(\text{Wai Meng does not score A in Mathematics in the final year examination})$

$$= 1 - 0.9025$$

$$= 0.0975$$

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) $P(\text{seorang murid lelaki tidak memakai cermin mata})$
 $P(\text{a male student is not wearing spectacles})$

$$= \frac{14}{36}$$

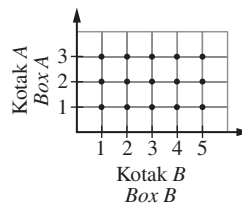
$$= \frac{7}{18}$$

- (b) $P(\text{seorang murid tidak memakai cermin mata})$
 $P(\text{a student is not wearing spectacles})$

$$= \frac{30}{36}$$

$$= \frac{5}{6}$$

- 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) $A = \text{Peristiwa mendapat dua nombor yang berlainan}$

$A = \text{Event of getting two different numbers}$

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

$$n(A) = 12$$

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

- (ii) $B = \text{Peristiwa mendapat hasil tambah bagi dua nombor bukan 7}$

$B = \text{Event of getting the sum of two numbers is not 7}$

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

$$n(B) = 13$$

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

Kaedah alternatif

Alternative method

$B = \text{Peristiwa mendapat hasil tambah bagi dua nombor ialah 7}$

$B = \text{Event of getting the sum of two numbers is 7}$

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

$$n(B) = 2$$

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

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

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

$$= \frac{13}{15}$$

- 17 $P(\text{pekerja itu pergi bekerja dengan van})$
 $P(\text{the worker travels to work by van})$

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

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

$$n(A) = 3$$

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

- (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

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

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

$$= \text{RM}16.90$$

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

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

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

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

$$= 12$$

$$n(S) = 60 + x$$

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

$$60 + x = 96$$

$$x = 36$$

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

	+	1	5	10	15	20
Pusingan pertama <i>First turn</i>	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) $n(S) = 25$

$$n(A) = 16$$

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

$$= \frac{16}{25}$$

$$n(B) = 6$$

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

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

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

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

$$= \frac{19}{25}$$