CHAPTER 9: PROBABILITY OF COMBINED EVENTS

TOPIK 9: KEBARANGKALIAN PERISTIWA BERGABUNG

1. There are 2 red balls (R) and 3 yellow balls (Y) in a box. Two balls are taken out at random from the box. Which of the following is the sample space of the combined events? PL1

Terdapat 2 biji bola merah (R) dan 3 biji bola kuning (Y) di dalam sebuah kotak. Dua biji bola dikeluarkan secara rawak daripada kotak itu. Antara berikut, yang manakah adalah ruang sampel bagi peristiwa bergabung itu?

A $\{(R, R), (R, Y), (R, Y), (R, Y)\}$

B $\{(Y, R), (Y, R), (Y, Y), (Y, Y)\}$

C $\{(R, Y), (R, Y), (Y, R), (Y, R)\}$

D $\{(R, R), (R, Y), (R, Y), (R, Y), (Y, R), (Y, R), (Y, Y), (Y, Y)\}$

2. Given that $C = \{\text{V, O, W, E, L}\}$ and $D = \{y : 4 \leqslant y \leqslant 9, y \text{ is an integer}\}$. An element is chosen randomly from set C and from set D. The possible outcomes for getting a vowel and an even number is PL1

Diberi $C = \{\text{V, O, W, E, L}\}$ dan $D = \{y : 4 \leqslant y \leqslant 9, y$ ialah integer$\}$. Satu unsur dipilih secara rawak daripada set C dan set D. Kesudahan yang mungkin untuk mendapat satu vokal dan satu nombor genap ialah

A $\{(\text{O}, 4), (\text{O}, 6), (\text{O}, 8), (\text{E}, 4), (\text{E}, 6), (\text{E}, 8)\}$

B $\{(\text{O}, 5), (\text{O}, 7), (\text{O}, 9), (\text{E}, 5), (\text{E}, 7), (\text{E}, 9)\}$

C $\{(\text{V}, 4), (\text{V}, 6), (\text{V}, 8), (\text{W}, 4), (\text{W}, 6), (\text{W}, 8), (\text{L}, 4), (\text{L}, 6), (\text{L}, 8)\}$

D $\{(\text{V}, 5), (\text{V}, 7), (\text{V}, 9), (\text{W}, 5), (\text{W}, 7), (\text{W}, 9), (\text{L}, 5), (\text{L}, 7), (\text{L}, 9)\}$

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3. The diagram below shows two events, P and Q.
Rajah di bawah menunjukkan dua peristiwa, P dan Q. PL2

Event *P*
Peristiwa P
A dice is tossed twice.
Sebiji dadu dilambung dua kali.

Event *Q*
Peristiwa Q
Two cards is chosen from a box contains cards with the letters "W, A, N, G".
Dua keping kad dipilih daripada kotak yang mengandungi huruf "W, A, N, G".

Determine which event is dependent event or independent event.
Tentukan peristiwa yang mana adalah peristiwa bersandar atau peristiwa tak bersandar.

	Event *P* ***Peristiwa P***	**Event *Q*** ***Peristiwa Q***
A	Independent event *Peristiwa tak bersandar*	Independent event *Peristiwa tak bersandar*
B	Independent event *Peristiwa tak bersandar*	Dependent event *Peristiwa bersandar*
C	Dependent event *Peristiwa bersandar*	Independent event *Peristiwa tak bersandar*
D	Dependent event *Peristiwa bersandar*	Dependent event *Peristiwa bersandar*

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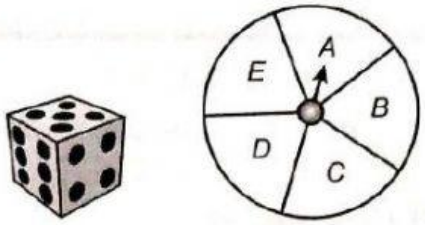
4. The diagram below shows a dice and a spinner with five sectors of the same size. **PL3**
Rajah di bawah menunjukkan sebiji dadu dan sebuah roda putar dengan lima sektor sama saiz.



The dice is rolled and the spinner is spun. Find the probability of getting 5 and a consonant.
Dadu itu dilambung dan roda putar itu diputar. Cari kebarangkalian mendapat 5 dan konsonan.

A $\frac{3}{5}$ **C** $\frac{1}{15}$

B $\frac{1}{10}$ **D** $\frac{23}{30}$

5. A box contains 7 red pens, 9 black pens and 12 blue pens. Chin Ren randomly takes two pens, one after the other. Find the probability that he will choose a black pen, then a blue pen. **PL3**
Sebuah kotak mengandungi 7 batang pen merah, 9 batang pen hitam dan 12 batang pen biru. Chin Ren memilih dua batang pen secara rawak, satu demi satu. Cari kebarangkalian bahawa dia akan memilih sebatang pen hitam, kemudian sebatang pen biru.

A $\frac{1}{7}$ **C** $\frac{3}{4}$

B $\frac{3}{7}$ **D** $\frac{27}{196}$

LIVEWORKSHEETS

6. A multi-choice question has four options, A, B, C and D. Fatimah randomly guesses the answer for three multi-choice questions. What is the probability of Fatimah answering all the three questions correctly? PL3

Satu soalan aneka pilihan mempunyai empat pilihan jawapan, A, B, C *dan* D. *Fatimah memilih jawapan bagi tiga soalan aneka pilihan secara rawak. Apakah kebarangkalian Fatimah menjawab ketiga-tiga soalan itu dengan betul?*

A $\frac{1}{4}$ **C** $\frac{1}{64}$

B $\frac{3}{4}$ **D** $\frac{3}{64}$

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7. Two six sided dice are rolled together. Find the probability that only a dice with digit 2 is facing upwards. PL3 HOTS

Dua biji dadu dengan enam muka dilambung bersama. Cari kebarangkalian bahawa hanya sebiji dadu dengan digit 2 menghadap ke atas.

A $\frac{1}{36}$ **C** $\frac{25}{36}$

B $\frac{5}{36}$ **D** $\frac{31}{36}$

LIVEWORKSHEETS

8. Container A has 5 yellow marbles, 8 red marbles and 7 white marbles whereas container B has 6 yellow marbles, 4 red marbles and 5 white marbles. A marble is picked at random from each container. What is the probability that both are red marbles? **PL3**

Bekas A ada 5 biji guli kuning, 8 biji guli merah dan 7 biji guli putih manakala bekas B ada 6 biji guli kuning, 4 biji guli merah dan 5 biji guli putih. Sebiji guli dipilih secara rawak dari setiap bekas. Apakah kebarangkalian bahawa kedua-dua biji guli itu berwarna merah?

A $\frac{2}{5}$ **C** $\frac{8}{75}$

B $\frac{4}{5}$ **D** $\frac{1}{12}$

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9. Given that set $P = \{2, 3, 4\}$ and $Q = \{5, 6\}$. A number is selected at random from each set. Find the probability that both numbers selected are even. **PL3**

Diberi set $P = \{2, 3, 4\}$ dan $Q = \{5, 6\}$. Satu nombor dipilih secara rawak daripada setiap set. Cari kebarangkalian bahawa kedua-dua nombor dipilih adalah genap.

A $\frac{5}{6}$ **C** $\frac{3}{6}$

B $\frac{2}{3}$ **D** $\frac{1}{3}$

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10. A dice is rolled. What is the probability of getting 2 or a number less than 4? **PL3**
Sebiji dadu dilambung. Apakah kebarangkalian untuk mendapat 2 atau nombor yang kurang daripada 4?

A $\frac{5}{6}$

B $\frac{2}{3}$

C $\frac{1}{2}$

D $\frac{1}{4}$

LIVEWORKSHEETS