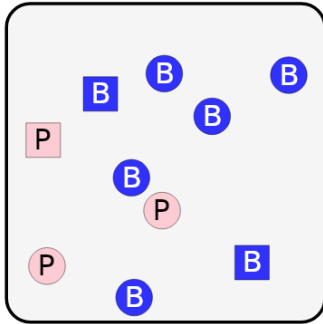




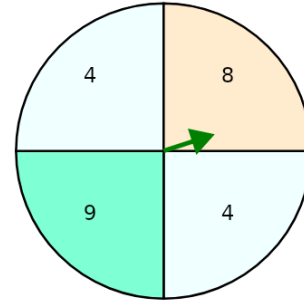
Calculate probabilities using counting techniques

- 1** What is the chance of drawing a circle at random from this bag?



A	$\frac{3}{3}$	B	$\frac{3}{10}$
C	$\frac{7}{10}$	D	$\frac{2}{6}$
E	$\frac{9}{10}$	F	$\frac{6}{6}$

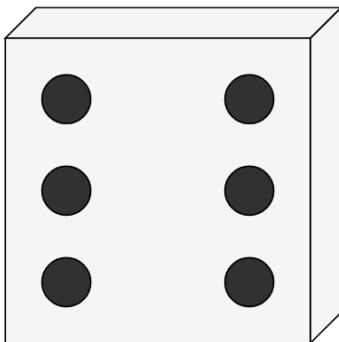
- 2** Calculate the probability of spinning 8. Show as a fraction



P(8)

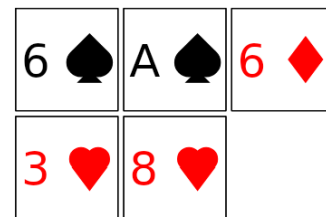
A	$\frac{2}{3}$	B	$\frac{3}{7}$
C	$\frac{3}{6}$	D	$\frac{1}{4}$
E	$\frac{1}{8}$		

- 3** What is the chance of rolling 4 on this dice?



A	$\frac{3}{5}$	B	$\frac{1}{6}$
C	$\frac{2}{11}$	D	$\frac{2}{3}$
E	$\frac{2}{10}$	F	$\frac{1}{12}$

- 4** Calculate the probability of drawing any Diamond. Show as a fraction



P(Diamond)

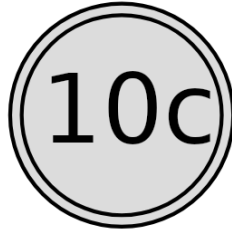
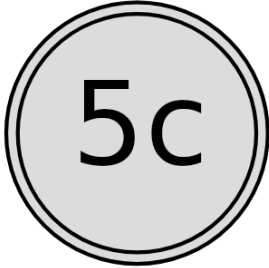
A	$\frac{3}{5}$	B	$\frac{1}{6}$
C	$\frac{5}{5}$	D	$\frac{1}{5}$



Calculate probabilities using counting techniques

5

What is the chance of flipping a mixed set (not both heads or both tails) on these coins?



A	$\frac{2}{3}$
---	---------------

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

C	$\frac{1}{6}$
---	---------------

D	$\frac{1}{7}$
---	---------------

E	$\frac{2}{5}$
---	---------------

F	$\frac{1}{2}$
---	---------------

6

A spinner with three equal-sized sections coloured red, green, and blue is spun twice. A favourable outcome is one where there is exactly one red.

A	4
---	---

B	9
---	---

C	3
---	---

D	5
---	---

7

A fair coin is flipped and a spinner with red, green, and blue sections is spun. There are 6 equally likely outcomes in the sample space. A favourable outcome is one where the spinner shows red.

A	$\frac{1}{6}$
---	---------------

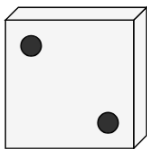
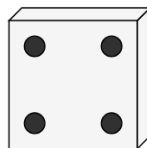
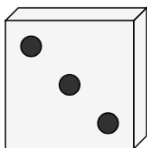
B	$\frac{1}{2}$
---	---------------

C	$\frac{2}{3}$
---	---------------

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

8

What is the chance of rolling the same number on all these dice?



A	$\frac{3}{45}$
---	----------------

B	$\frac{2}{61}$
---	----------------

C	$\frac{1}{36}$
---	----------------

D	$\frac{1}{17}$
---	----------------

E	$\frac{1}{74}$
---	----------------

F	$\frac{2}{26}$
---	----------------

9

Order does not matter

Order does not matter

A	Permutation
---	-------------

B	Combination
---	-------------

10

A fair six-sided die is rolled and a spinner with red, green, and blue sections is spun. A favourable outcome is one where the die shows a 5. There are 3 favourable outcomes.

A	$\frac{1}{5}$
---	---------------

B	$\frac{5}{6}$
---	---------------

C	$\frac{1}{6}$
---	---------------

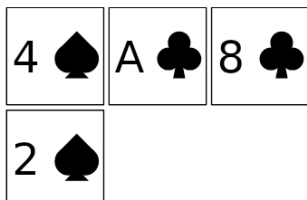
D	$\frac{2}{9}$
---	---------------



Calculate probabilities using counting techniques

11

Calculate the probability of drawing 2 Clubs.
Show as a fraction in binomial (bracket) notation

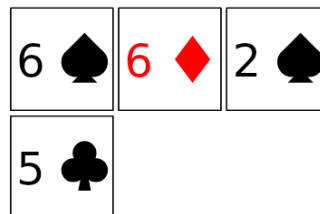


P(2 Clubs)

A	$\frac{\binom{2}{2}}{\binom{4}{2}}$	B	$\frac{\binom{4}{3}}{\binom{6}{3}}$
C	$\frac{\binom{2}{2}}{\binom{6}{2}}$	D	$\frac{\binom{3}{3}}{\binom{6}{3}}$
E	$\frac{\binom{2}{4}}{\binom{2}{2}}$		

12

Calculate the probability of drawing 2 6s. Show as a fraction in nCm form

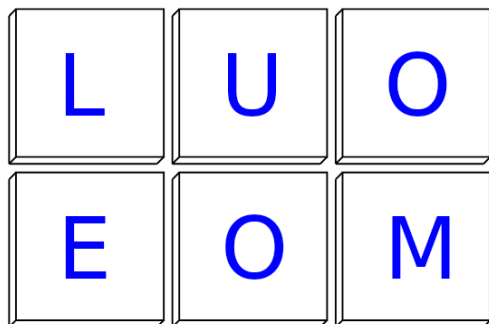


P(2 6s)

A	$\frac{{}_2C_2}{{}_2C_4}$	B	$\frac{{}_2C_2}{{}_4C_2}$
C	$\frac{{}_2C_4}{{}_2C_2}$	D	$\frac{{}_4C_2}{{}_2C_2}$

13

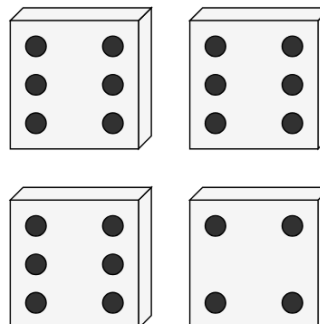
What's the chance of drawing 3 vowels from this set? Show in nCm notation.



A	$\frac{{}_4P_3}{{}_6P_3}$	B	$\frac{{}_4P_3}{{}_6R_3}$
C	$\frac{{}_4P_3}{{}_6B_3}$	D	$\frac{{}_4C_3}{{}_6C_3}$
E	$\frac{{}_3C_4}{{}_6R_3}$	F	$\frac{{}_4R_3}{{}_6P_3}$

14

What is the chance of rolling the same number on all these dice?



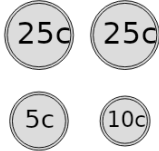
A	$\frac{3}{147}$	B	$\frac{2}{51}$
C	$\frac{1}{216}$	D	$\frac{3}{368}$
E	$\frac{2}{140}$	F	$\frac{2}{37}$



Calculate probabilities using counting techniques

15

What is the chance of flipping a mixed set (not all heads or all tails) on these coins?



A 2.4

B 0.625

C 0.692

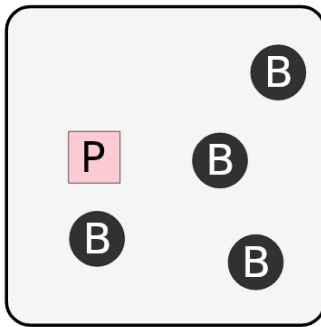
D 0.188

E 0.875

F 0.167

17

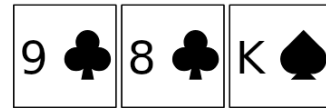
What is the chance of drawing two squares in a row at random from this bag?

A $\frac{1}{10}$ B $\frac{1}{4}$

C 0

D $\frac{1}{5}$ E $\frac{1}{3}$ **16**

Calculate the probability of drawing 8, 9 in order. Show as a fraction



P(8, 9 in order)

A $\frac{10}{21}$ B $\frac{1}{6}$ C $\frac{8}{8}$ D $\frac{7}{14}$ E $\frac{7}{17}$