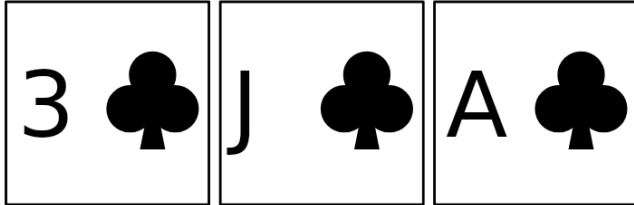


Probability and Counting - Single Event Advanced

- 1 How many distinct ways can these cards be ordered? Show as a multiplication.



A $3 \cdot 2$

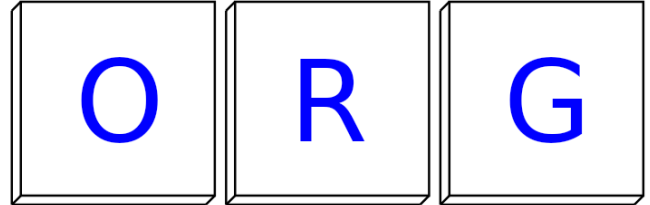
B
$$\frac{3 \cdot 2}{3 \cdot 2 \cdot 1}$$

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

D
$$\frac{3 \cdot 2}{1 \cdot 3 \cdot 2}$$

E
$$\frac{3 \cdot 2}{1 \cdot 2}$$

- 2 How many distinct ways can these letter tiles be ordered? Show as a multiplication.



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

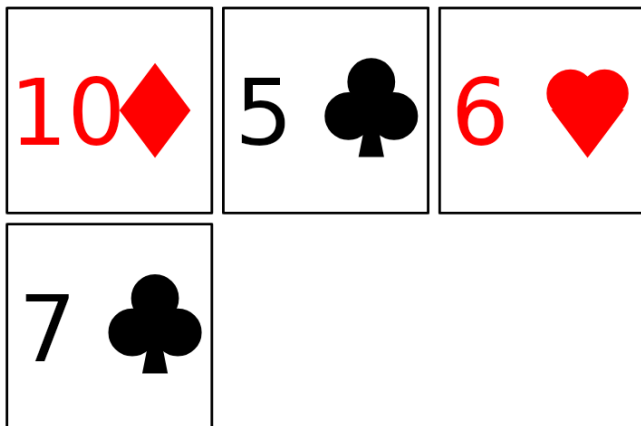
B
$$\frac{3 \cdot 2}{1 \cdot 3 \cdot 2}$$

C $3 \cdot 2$

D
$$\frac{3 \cdot 2}{3 \cdot 2 \cdot 1}$$

E
$$\frac{3 \cdot 2}{2}$$

- 3 How many distinct ways can these cards be ordered? Show as a multiplication.

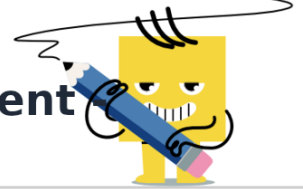


A
$$\frac{4 \cdot 3 \cdot 2}{2}$$

B
$$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 1}$$

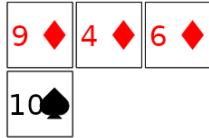
C $3 \cdot 2$

D $4 \cdot 3 \cdot 2$



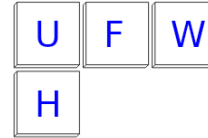
Probability and Counting - Single Event Advanced

4 How many distinct ways can these cards be ordered?



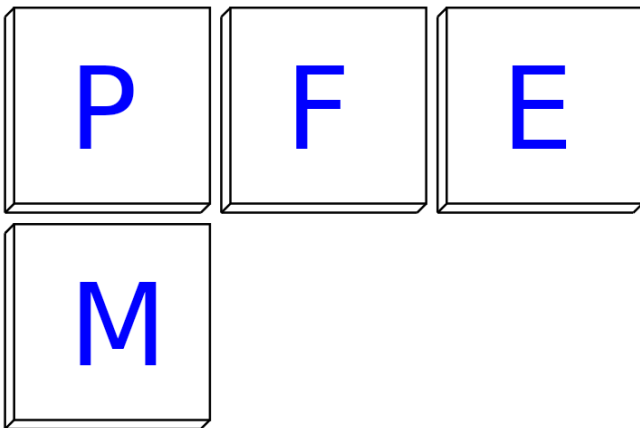
A	3	B	1	C	5
D	24	E	6	F	2

5 How many distinct ways can these letter tiles be ordered?



A	5	B	24	C	2
D	1	E	0	F	6

6 How many distinct ways can these letter tiles be ordered? Show as a multiplication.



A

$$\frac{4 \cdot 3 \cdot 2}{4 \cdot 3 \cdot 2 \cdot 1}$$

B

$$4 \cdot 3 \cdot 2$$

C

$$\frac{4 \cdot 3 \cdot 2}{1 \cdot 2}$$

D

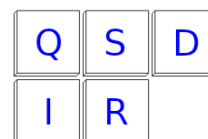
$$5 \cdot 4 \cdot 3 \cdot 2$$

7 How many distinct ways can these cards be ordered?

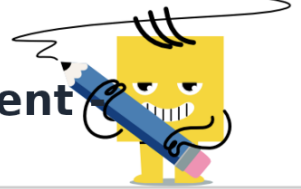


A	16	B	1	C	3
D	30	E	120	F	10

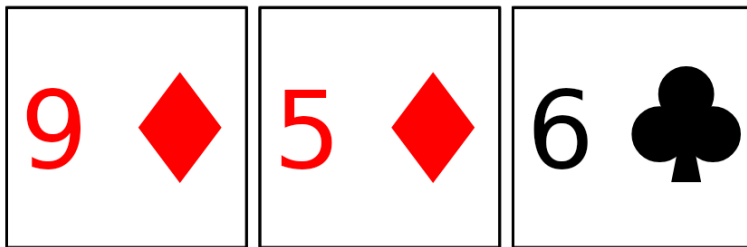
8 How many distinct ways can these letter tiles be ordered?



A	120	B	16	C	30
D	10	E	3	F	8

**Probability and Counting - Single Event
Advanced**

9 How many distinct ways can these cards be ordered? Show as a factorial.



A

$$3!$$

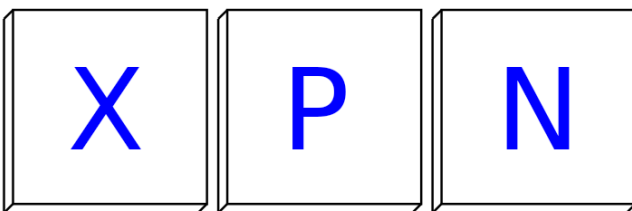
B

$$\frac{3!}{1! \cdot 2!}$$

C

$$\frac{3!}{3! \cdot 0!}$$

10 How many distinct ways can these letter tiles be ordered? Show as a factorial.



A

$$\frac{3!}{3!}$$

B

$$\frac{3!}{1! \cdot 3!}$$

C

$$3!$$

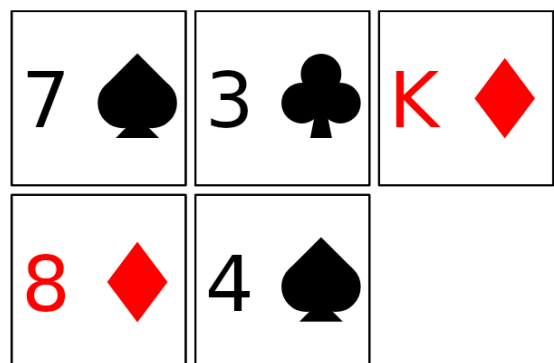
D

$$\frac{3!}{1! \cdot 2!}$$

E

$$\frac{3!}{3! \cdot 0!}$$

11 How many distinct ways can these cards be ordered? Show as a multiplication.



A

$$\frac{5 \cdot 4 \cdot 3 \cdot 2}{2}$$

B

$$\frac{5 \cdot 4 \cdot 3 \cdot 2}{1 \cdot 3 \cdot 2}$$

C

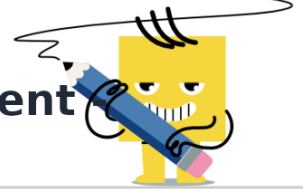
$$5 \cdot 4 \cdot 3 \cdot 2$$

D

$$\frac{5 \cdot 4 \cdot 3 \cdot 2}{5 \cdot 4 \cdot 3 \cdot 2 \cdot 1}$$

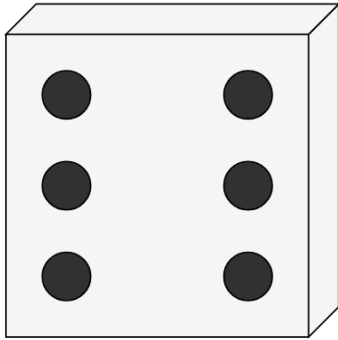
E

$$\frac{5 \cdot 4 \cdot 3 \cdot 2}{1 \cdot 2}$$



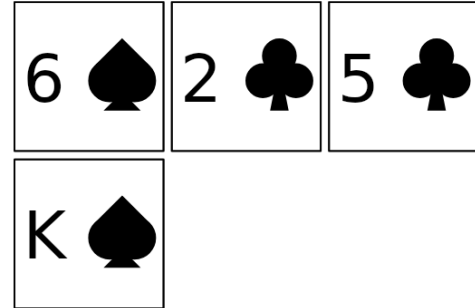
Probability and Counting - Single Event Advanced

12 What is the chance of rolling 1 on this dice?



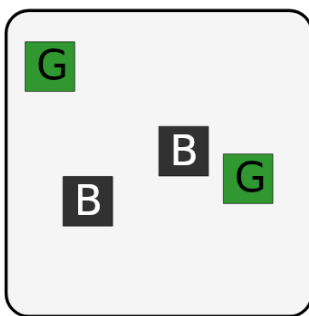
A	$\frac{3}{13}$	B	$\frac{3}{4}$
C	$\frac{3}{9}$	D	$\frac{1}{6}$
E	$\frac{2}{5}$	F	$\frac{2}{3}$

13 How many distinct ways can these cards be ordered? Show as a factorial.



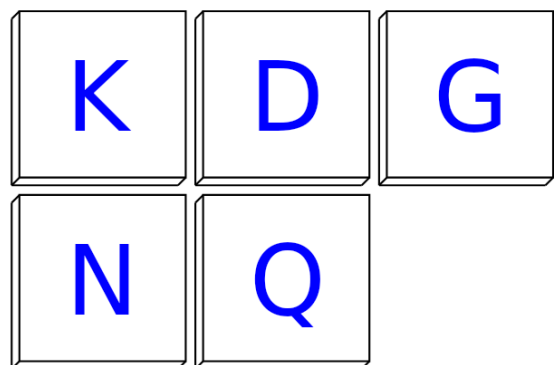
A	$5!$	B	$\frac{4!}{1! \cdot 2!}$
C	$\frac{4!}{4! \cdot 0!}$	D	$\frac{4!}{2!}$
E	$4!$		

14 What is the chance of drawing a black square at random from this bag?

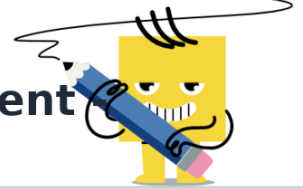


A	$\frac{3}{3}$	B	$\frac{1}{8}$
C	$\frac{3}{10}$	D	$\frac{2}{10}$
E	$\frac{2}{4}$	F	$\frac{5}{6}$

15 How many distinct ways can these letter tiles be ordered? Show as a multiplication.

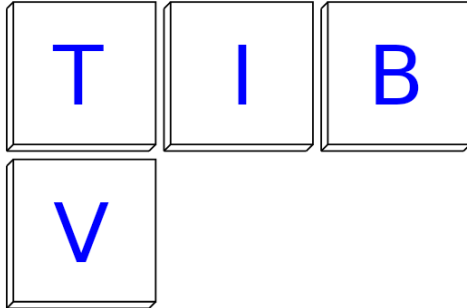


A	$6 \cdot 5 \cdot 4 \cdot 3 \cdot 2$	B	$5 \cdot 4 \cdot 3 \cdot 2$
C	$\frac{5 \cdot 4 \cdot 3 \cdot 2}{5 \cdot 4 \cdot 3 \cdot 2 \cdot 1}$	D	$3 \cdot 2$
E	$\frac{5 \cdot 4 \cdot 3 \cdot 2}{1 \cdot 3 \cdot 2}$	F	$\frac{5 \cdot 4 \cdot 3 \cdot 2}{1 \cdot 2}$



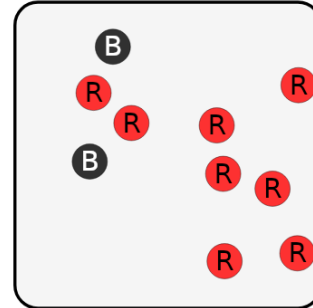
Probability and Counting - Single Event Advanced

16 How many distinct ways can these letter tiles be ordered? Show as a factorial.



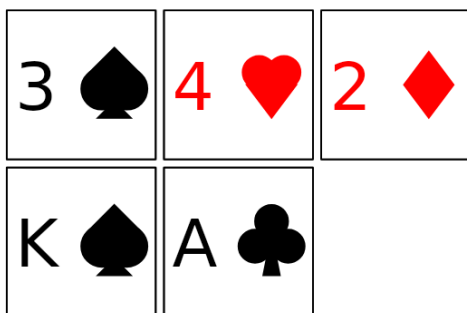
A	$\frac{4!}{4! \cdot 0!}$	B	$4!$
C	$\frac{5!}{3!}$	D	$\frac{4!}{1! \cdot 3!}$
E	$\frac{4!}{2!}$	F	$\frac{4!}{1! \cdot 2!}$

17 What is the chance of drawing a red circle at random from this bag?



A	$\frac{3}{3}$	B	$\frac{2}{3}$
C	$\frac{6}{6}$	D	$\frac{6}{10}$
E	$\frac{1}{4}$	F	$\frac{8}{10}$

18 How many distinct ways can these cards be ordered? Show as a factorial.



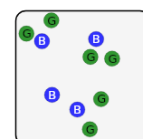
A	$\frac{5!}{3!}$	B	$5!$
C	$\frac{5!}{1! \cdot 2!}$	D	$6!$
E	$\frac{5!}{5! \cdot 0!}$	F	$3!$

19 What is the chance of drawing a white square at random from this bag?

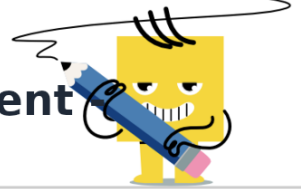


A	0.667	B	0.833	C	0.5
D	0.1	E	0.167	F	0.75

20 What is the chance of drawing a blue circle at random from this bag?

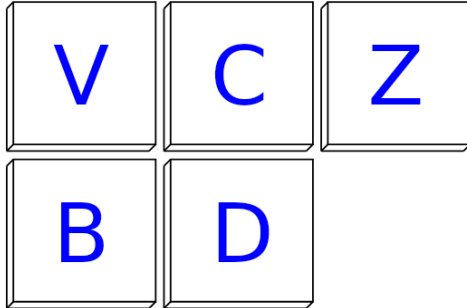


A	0.75	B	0.4	C	0.2
D	0.25	E	1	F	0.333



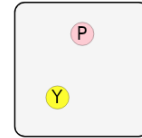
Probability and Counting - Single Event Advanced

21 How many distinct ways can these letter tiles be ordered? Show as a factorial.



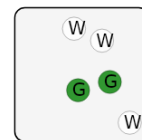
A	4!	B	5!
C	$\frac{5!}{5! \cdot 0!}$	D	$\frac{7!}{4!}$
E	$\frac{5!}{2!}$		

22 What is the chance of drawing a pink circle at random from this bag?



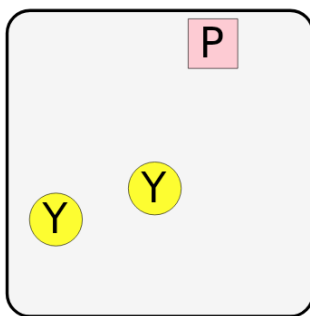
A	12.5%	B	50%	C	60%
D	20%	E	66.7%	F	25%

23 What is the chance of drawing a white circle at random from this bag?



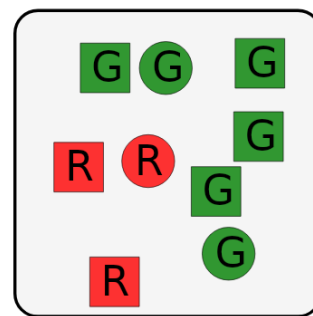
A	100%	B	16.7%	C	33.3%
D	60%	E	66.7%	F	50%

24 What is the chance of drawing a yellow circle at random from this bag?

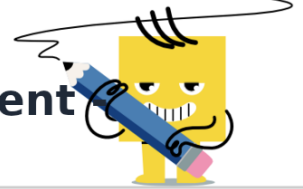


A	$\frac{5}{10}$	B	$\frac{2}{2}$
C	$\frac{1}{4}$	D	$\frac{1}{3}$
E	$\frac{1}{2}$	F	$\frac{2}{3}$

25 What is the chance of drawing a green square at random from this bag?

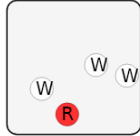


A	$\frac{2}{5}$	B	$\frac{4}{6}$
C	$\frac{5}{6}$	D	$\frac{1}{3}$
E	$\frac{4}{9}$	F	$\frac{8}{10}$



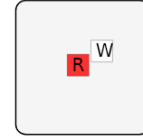
Probability and Counting - Single Event Advanced

26 What is the chance of drawing a white circle at random from this bag?



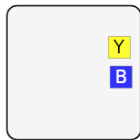
A	1	B	0.75	C	0.6
D	0.5	E	0.875	F	0.333

27 What is the chance of drawing a white square at random from this bag?



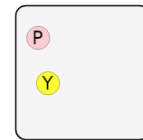
A	0.667	B	0.3	C	0.25
D	0.6	E	0.333	F	0.5

28 What is the chance of drawing a blue square at random from this bag?



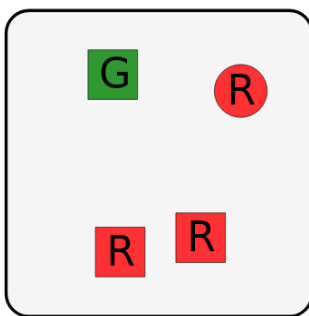
A	50%	B	12.5%	C	25%
D	37.5%	E	33.3%	F	20%

29 What is the chance of drawing a yellow circle at random from this bag?



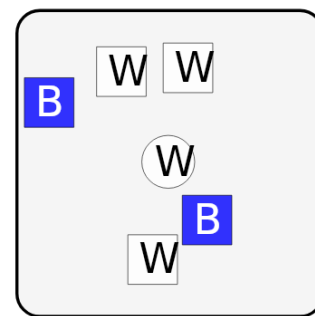
A	25%	B	30%	C	40%
D	50%	E	66.7%	F	20%

30 What is the chance of drawing a square at random from this bag?

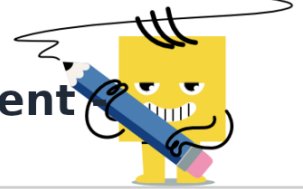


A	$\frac{2}{2}$	B	$\frac{3}{4}$
C	$\frac{4}{10}$	D	$\frac{1}{10}$
E	$\frac{7}{8}$	F	$\frac{5}{5}$

31 What is the chance of drawing a square at random from this bag?



A	$\frac{4}{6}$	B	$\frac{2}{3}$
C	$\frac{4}{8}$	D	$\frac{5}{6}$
E	$\frac{3}{6}$	F	$\frac{5}{5}$



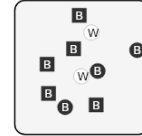
Probability and Counting - Single Event Advanced

32 What is the chance of drawing a square at random from this bag?



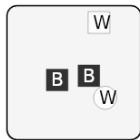
A	0.4	B	0.6	C	0.125
D	0.5	E	0.667	F	0.75

33 What is the chance of drawing a circle at random from this bag?



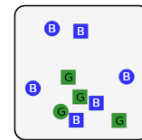
A	0.8	B	1	C	0.25
D	0.5	E	0.2	F	0.75

34 What is the chance of drawing a circle at random from this bag?



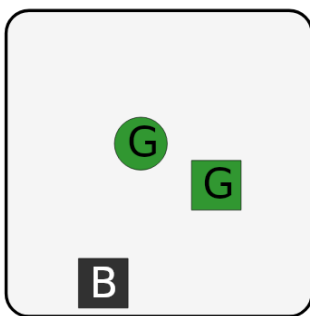
A	37.5%	B	50%	C	100%
D	66.7%	E	25%	F	40%

35 What is the chance of drawing a circle at random from this bag?



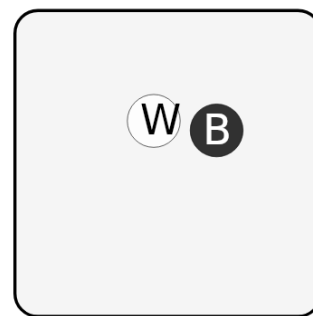
A	100%	B	50%	C	66.7%
D	33.3%	E	40%	F	75%

36 What is the chance of drawing a black shape at random from this bag?

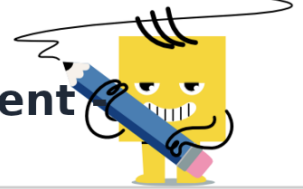


A	$\frac{3}{4}$	B	$\frac{1}{10}$
C	$\frac{1}{8}$	D	$\frac{3}{5}$
E	$\frac{2}{2}$	F	$\frac{1}{3}$

37 What is the chance of drawing a black shape at random from this bag?

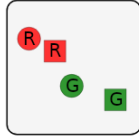


A	$\frac{2}{6}$	B	$\frac{1}{10}$
C	$\frac{3}{10}$	D	$\frac{1}{2}$
E	$\frac{1}{4}$	F	$\frac{3}{5}$



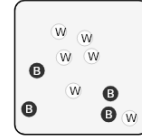
Probability and Counting - Single Event Advanced

38 What is the chance of drawing a red shape at random from this bag?



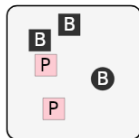
A	0.333	B	0.4	C	0.25
D	0.3	E	0.375	F	0.5

39 What is the chance of drawing a black shape at random from this bag?



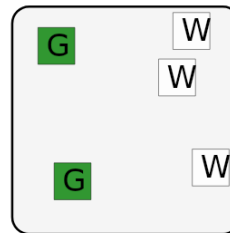
A	0.8	B	0.667	C	0.4
D	0.25	E	0.2	F	0.333

40 What is the chance of drawing a black shape at random from this bag?



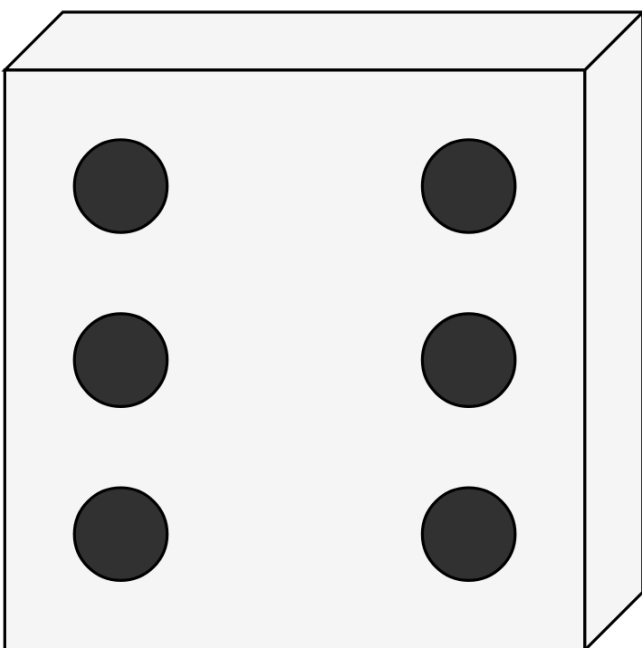
A	60%	B	25%	C	100%
D	87.5%	E	12.5%	F	80%

41 What is the chance of drawing a white shape at random from this bag?

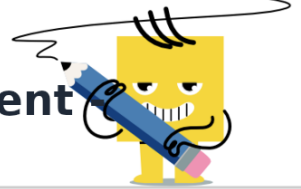


A	33.3%
B	100%
C	40%
D	60%

42 What is the equation for the chance of NOT rolling a 5 on this dice?

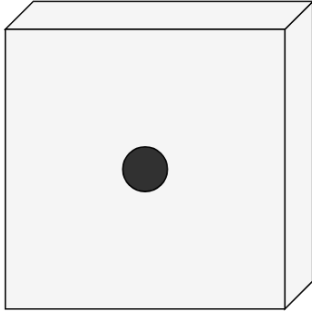


A	$\frac{1}{6} \cdot \frac{1}{6} \cdot \frac{1}{6} \cdot \frac{1}{6}$
B	$\frac{1}{6}$
C	$1 - \frac{1}{6}$
D	$1 - \frac{1}{6} \cdot \frac{1}{6} \cdot \frac{1}{6}$



Probability and Counting - Single Event Advanced

43 What is the chance of NOT rolling a 5 on this dice?



A	$\frac{4}{14}$	B	$\frac{8}{11}$
C	$\frac{5}{6}$	D	$\frac{2}{13}$
E	$\frac{10}{4}$	F	$\frac{7}{7}$

44 Select the correct equivalent to this factorial
 $4!$

A	$4 \cdot 3 \cdot 2$	B	1
C	$3 \cdot 2$	D	$4 \cdot 3$

45 Select the correct equivalent to this factorial
 $4!$

A	$\frac{1}{4}$	B	2
C	24	D	12
E	120		

46 Select the correct factorial equivalent to this multiplication

$$6 \cdot 5 \cdot 4 \cdot 3 \cdot 2$$

A	$4!$	B	$6!$
C	$5!$	D	$7!$