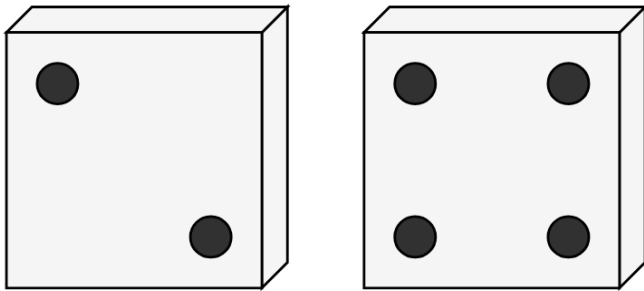




Probability Distributions

- 1 What is the equation for the chance of rolling at least one 1 on these dice?



A

$$\frac{1}{6} \cdot \frac{1}{6}$$

B

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

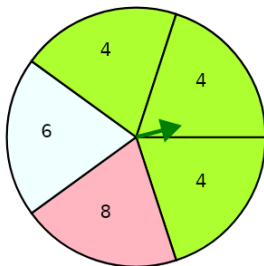
C

$$\frac{1}{6}$$

D

$$\frac{1}{6} + \frac{1}{6} - \frac{1}{6} \cdot \frac{1}{6}$$

- 2 Calculate the probability of spinning 6 at least once, given two spins. Show as a fraction



P(6 in 2 spins)

A $\frac{7}{24}$

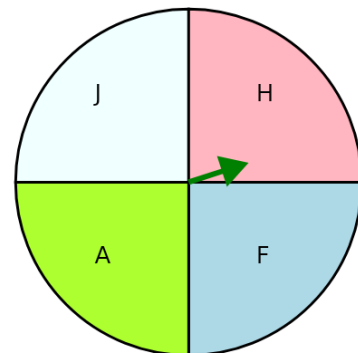
B $\frac{6}{27}$

C $\frac{9}{25}$

D $\frac{6}{25}$

E $\frac{9}{24}$

- 3 Calculate the probability of spinning J at least once, given two spins. Show as a decimal



P(J in 2 spins)

A 0.25

B 0.56

C 0.63

D 0.44

E 0.31

F 0.39



Probability Distributions

4 What ticket price would make this a fair game?

A	\$10	B	\$5
C	\$9.5	D	\$15

5 What is the expected value $E(X)$?

A	1.1	B	1
C	3	D	2.1

6 Is this a fair game?

A	Yes, the game is fair
B	No, the game is not fair

7 Which partial outcome table shows the random variable X calculated correctly?

Experiment: flip 2 coins. Let X = the number of heads. Which partial outcome table lists X correctly for its outcomes?

8 Which of these is a suitable random variable X for the experiment?

Experiment: roll a die 6 times. Which of these could be the random variable X ?

A	The number of even rolls
B	The probability of rolling an even number

9 What is the expected gain or loss per ticket?

A	\$5	B	\$6
C	\$11	D	-\$5

10 Is this a valid probability table?

A	Yes, it is a valid probability table
B	No, it is not a valid probability table