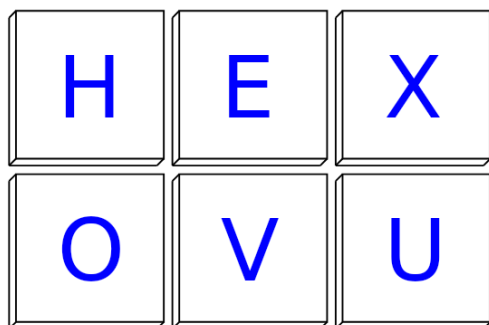


Calculate binomial probabilities

- 1** How many ways can 2 vowels be drawn from this set? Show as a factorial.



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

- 2** What is the value of this probability expression?

$$\frac{1}{6}C_5$$

- | | |
|------------------|------------------|
| A $\frac{1}{90}$ | B $\frac{25}{6}$ |
| C $\frac{1}{5}$ | D $\frac{1}{6}$ |

- 3** What is the value of this probability expression?

$$\frac{1}{\binom{5}{3}}$$

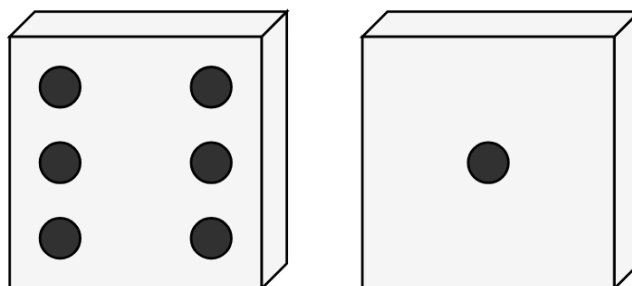
- | | |
|------------------|-----------------|
| A $\frac{1}{15}$ | B 1 |
| C $\frac{1}{10}$ | D $\frac{3}{5}$ |

- 4**
$$(x+3)^5 = \sum_{k=0}^5 \binom{5}{k} x^{5-k} 3^k$$

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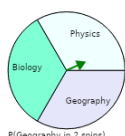
- | | |
|-------|--------|
| A 405 | B 270 |
| C 90 | D -270 |

- 5** What is the equation for the chance of rolling at least one 3 on these dice?

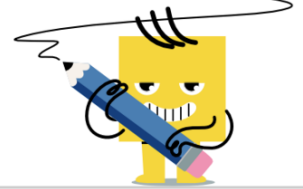


- | | |
|---|---------------------------------------|
| A $\frac{1}{6} \cdot \frac{1}{6}$ | B $\frac{1}{6}$ |
| C $\frac{1}{6} + \frac{1}{6} - \frac{1}{6} \cdot \frac{1}{6}$ | D $1 - \frac{1}{6} \cdot \frac{1}{6}$ |

- 6** Calculate the probability of spinning Geography at least once, given two spins. Show as a decimal



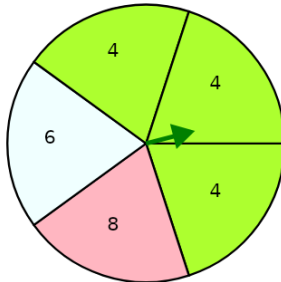
- | | | |
|--------|--------|--------|
| A 0.56 | B 4 | C 0.11 |
| D 0.22 | E 0.71 | F 0.78 |



Calculate binomial probabilities

7

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

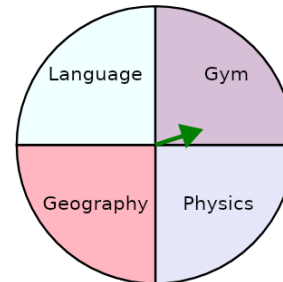


P(6 in 2 spins)

A	$\frac{7}{24}$	B	$\frac{6}{27}$
C	$\frac{9}{25}$	D	$\frac{6}{25}$
E	$\frac{9}{24}$		

8

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



P(Geography in 2 spins)

A	$\frac{7}{16}$	B	$\frac{6}{15}$
C	$\frac{9}{14}$	D	$\frac{9}{16}$
E	$\frac{4}{15}$		

9

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

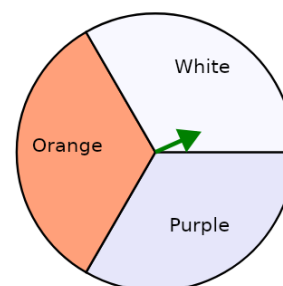


P(Swimming in 2 spins)

A 0.44	B 0.38	C 0.41
D 0.5	E 0.54	F 0.4

10

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

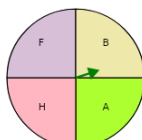


P(White in 2 spins)

A	$\frac{6}{8}$	B	$\frac{4}{11}$
C	$\frac{5}{11}$	D	$\frac{6}{7}$
E	$\frac{5}{9}$		

11

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



P(B in 2 spins)

A 0.44	B 0.56	C 0.58
D 0.37	E 0.63	F 0.31