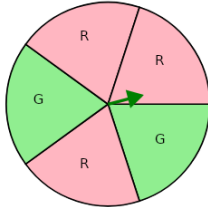


Use tree diagrams for sample spaces

1

List all the possible outcomes.



A red, green

B red, green, orange, blue

C red

D red, green, blue

2

You are putting together a pizza. There are 2 crusts, 2 sauces, 4 meats, 3 vegetables, and 2 cheeses to choose from. Which multiplication gives the number of different pizzas you can make?



A $2 + 2 + 4 + 3 +$

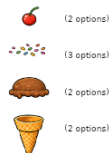
B $1 \times 2 \times 4 \times 3 \times$

C $3 \times 2 \times 4 \times 3 \times$

D $2 \times 2 \times 4 \times 3 \times$

3

You are putting together an ice cream cone. There are 2 cones, 2 ice cream flavors, 3 sprinkle styles, and 2 toppings to choose from. How many different ice cream cones can you make?



A 24

B 23

C 25

D 9

4

A spinner with three equal-sized sections coloured red, green, and blue is spun twice.

A 12

B 9

C 6

D 8

5

You are putting together an avatar. You choose one eye color (brown, blue, green, hazel), one sunglasses style (aviator, round, wayfarer), one hairstyle (short, long, curly), and one hat (cap, beanie). Which multiplication gives the number of different avatars you can make?



A $4 \times 3 \times 3 \times 2$

B $4 + 3 + 3 + 2$

C $3 \times 3 \times 3 \times 2$

D $5 \times 3 \times 3 \times 2$

6

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 coin shows tails.

A $\frac{1}{2}$

B $\frac{1}{3}$

C $\frac{2}{3}$

D $\frac{3}{7}$

7

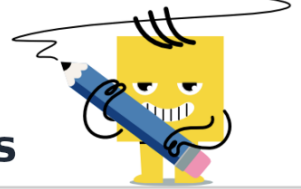
Three fair six-sided dice are rolled. A favourable outcome is one where the total is less than 6. There are 10 favourable outcomes.

A $\frac{108}{5}$

B $\frac{5}{103}$

C $\frac{103}{108}$

D $\frac{5}{108}$



Use tree diagrams for sample spaces

8

You are putting together a pizza. You choose one crust (thin, thick, stuffed), one sauce (tomato, pesto, white), one meat (pepperoni, sausage, ham, bacon), one vegetable (mushroom, onion, pepper, olive), and one cheese (mozzarella, cheddar, feta). How many different pizzas can you make?



(mozzarella, cheddar, feta)



(mushroom, onion, pepper, olive)



(pepperoni, sausage, ham, bacon)



(tomato, pesto, white)



(thin, thick, stuffed)

A

431

B

433

C

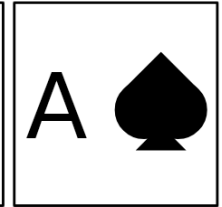
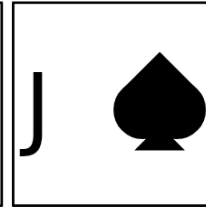
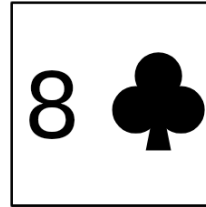
432

D

17

9

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



A

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

B

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

C

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

D

$$3 \cdot 2$$

E

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

10

A spinner with three equal-sized sections coloured red, green, and blue is spun three times.

A

RRR RRG RRB RGR RGG
 RGB RBR RBG RBB GRR
 GRG GRB GGR GGG GGB
 GBR GBG GBB BRR BRG
 BRB BGR BGG BGB BBR
 BBG BBB

B

RRR RRG RRB RGR RGG
 RGB RBR RBG RBB