Interpreting Compound Events

Maria wants to order pizza from Papi's Pizza Palace.

Size	Crust	Toppings
Small Medium Large	Thin Deep Dish	Sausage Pepperoni Mushroom Onion Green Pepper Black Olive

What is the probability that someone will order a small, thin crust, sausage pizza?

Gary says that there are 30 different types of pizza you could order from Papi's. Jerry says that there are 36 different types. Who is correct? Justify your answer.

What is the P(Large, Deep Dish, pepperoni) ?

Interpreting Compound Events

Size	Ice cream flavor	Toppings
Small Medium Large	Vanilla Chocolate Strawberry	Peanuts Sprinkles Caramel Hot fudge Whipped Cream Fruit Marshmallows

Ginny works at an ice cream shop. She says that the probability of a customer ordering a small, vanilla sundae, with caramel is 1/21. Is Ginny correct? Why or Why not?

What is the probability that a customer will order a Large, Chocolate sundae, with Hot fudge?

Hanna is shopping at the mall. She buys a brown pair of shoes and black pair of shoes, a pair of blue jeans, a pair of khakis, a blouse, and a hoodie. She says that she has 6 different outfits that she could wear. Jenna says that she has 5 different outfit combinations to wear. Who is correct? How do you know?

ANSWER KEY

Maria wants to order pizza from Papi's Pizza Palace.

Size	Crust	Toppings
Small Medium Large	Thin Deep Dish	Sausage Pepperoni Mushroom Onion Green Pepper Black Olive

What is the probability that someone will order a small, thin crust, sausage pizza? $\frac{1}{36}$

Gary says that there are 30 different types of pizza you could order from Papi's. Jerry says that there are 36 different types. Who is correct? Justify your answer.
Jerry is correct. There are 3 size options 2 crust options, and 6 toppings options.
3(2)(6)= 36 possible outcomes.

What is the P(Large, Deep Dish, pepperoni) ?
P(Large, Deep dish, pepperoni)= $\frac{1}{3} \bullet \frac{1}{2} \bullet \frac{1}{6} = \frac{1}{36}$

Size	Ice cream flavor	Toppings
Small Medium Large	Vanilla Chocolate Strawberry	Peanuts Sprinkles Caramel Hot fudge Whipped Cream Fruit Marshmallows

Ginny works at an ice cream shop. She says that the probability of a customer ordering a small, vanilla sundae, with caramel is 1/21. Is Ginny correct? Why or Why not?
P(Small, Vanilla, Caramel)= $\frac{1}{3} \bullet \frac{1}{3} \bullet \frac{1}{7} = \frac{1}{63}$

Ginny is not correct. The actual probability of getting a small vanilla sundae with caramel is $\frac{1}{63}$.

What is the probability that a customer will order a Large, Chocolate sundae, with Hot fudge?
P(Large, Chocolate, Hot fudge)= $\frac{1}{3} \bullet \frac{1}{3} \bullet \frac{1}{7} = \frac{1}{63}$

Hanna is shopping at the mall. She buys a brown pair of shoes and black pair of shoes, a pair of blue jeans, a pair of khakis, a blouse, and a hoodie. She says that she has 6 different outfits that she could wear. Jenna says that she has 5 different outfit combinations to wear. Who is correct? How do you know?
Shoes • Pants • Tops = Total possible outfits
2 • 2 • 2 = 8 possible outfit combinations
Neither Hanna nor Jenna are correction. Hanna has 8 possible outfit combinations.