



This doesn't seem like a lot of choices.

There are only 2 choices of meat, 3 sides, 3 drinks, and 2 desserts to choose from.

Name _____

Fall Festival Cookout Order Form

Circle 1 item from each category:

Meat

Hot Dog Hamburger

Add Ketchup _____

Add Mustard _____

Sides

Potato Salad Green Beans Corn

Drink

Milk Juice Lemonade

Dessert

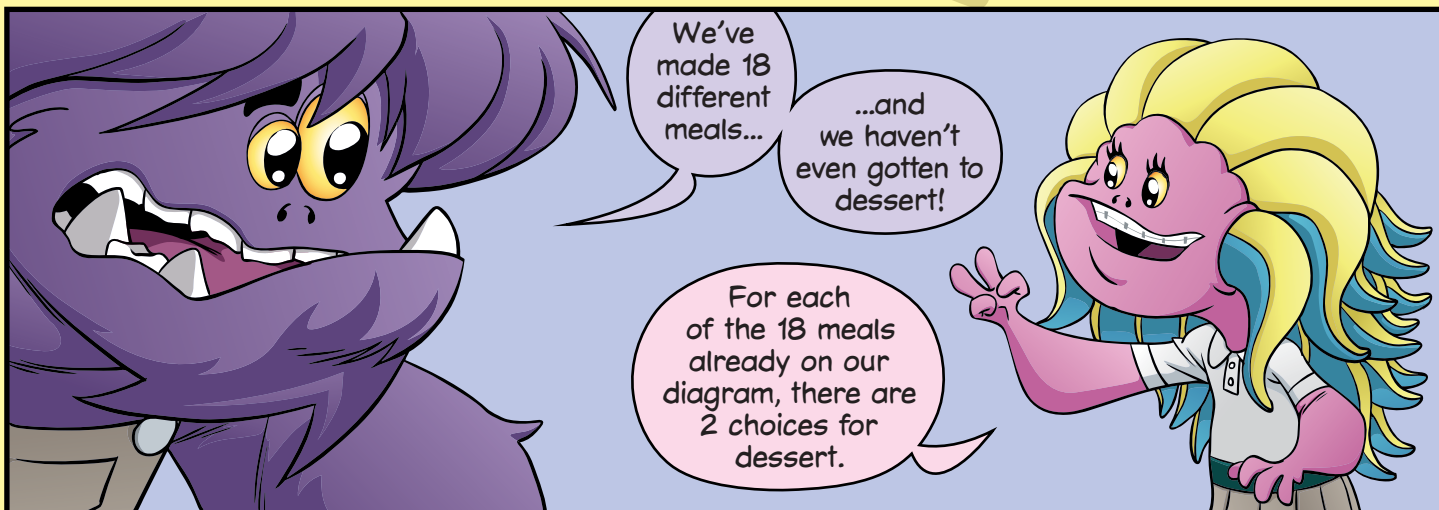
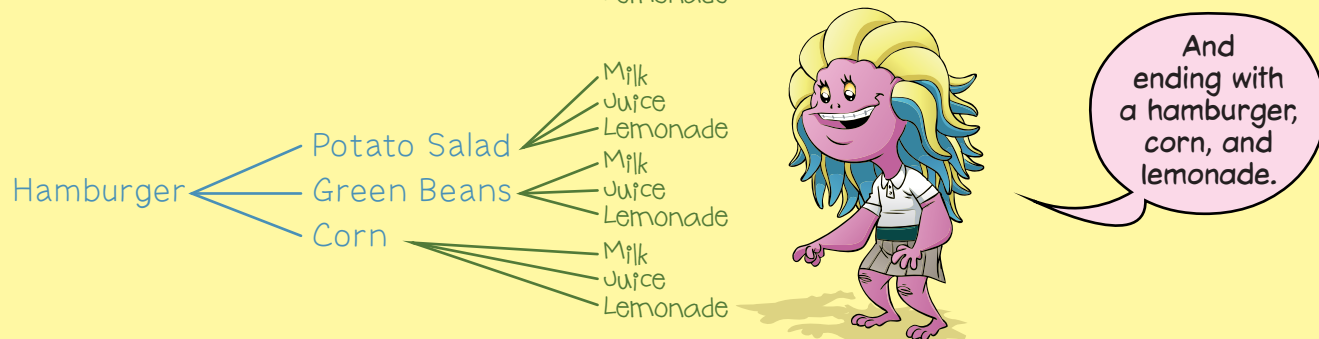
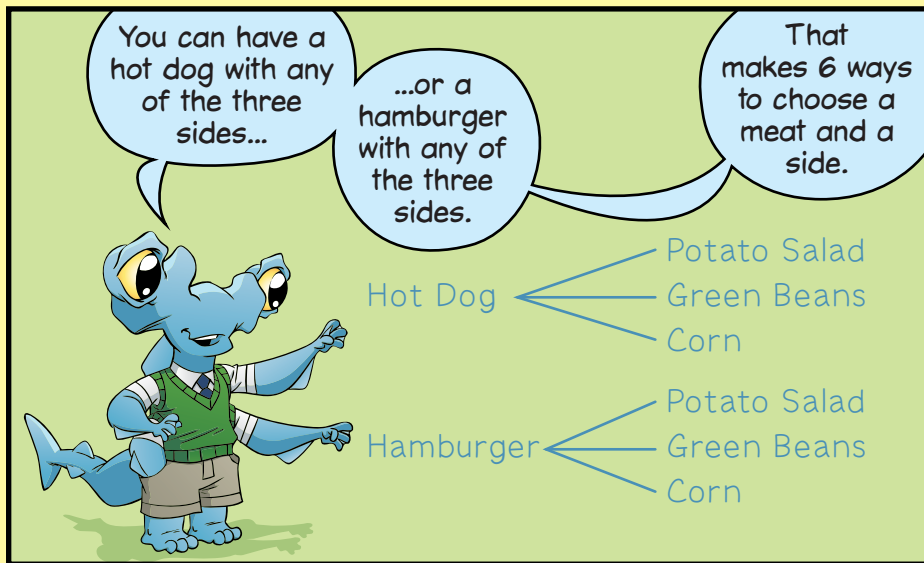
Brownie Pie

You can choose one of each.

How many different meals can you make with those choices?

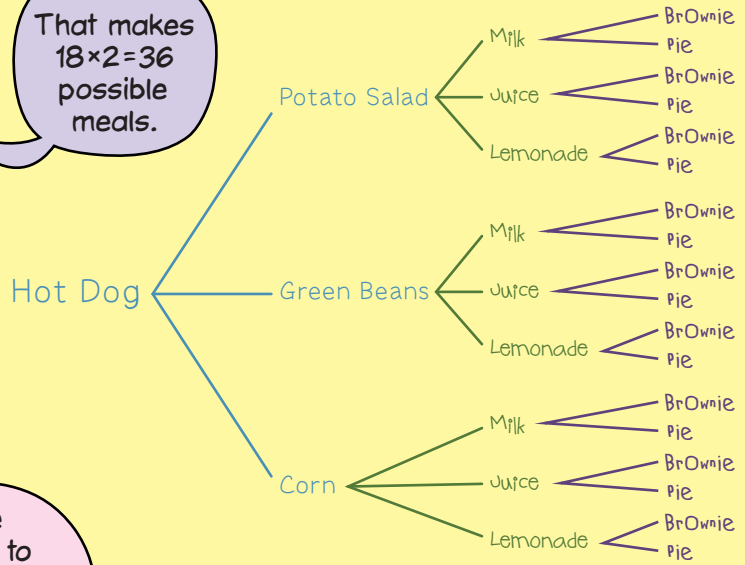


How could you count all of the meals?



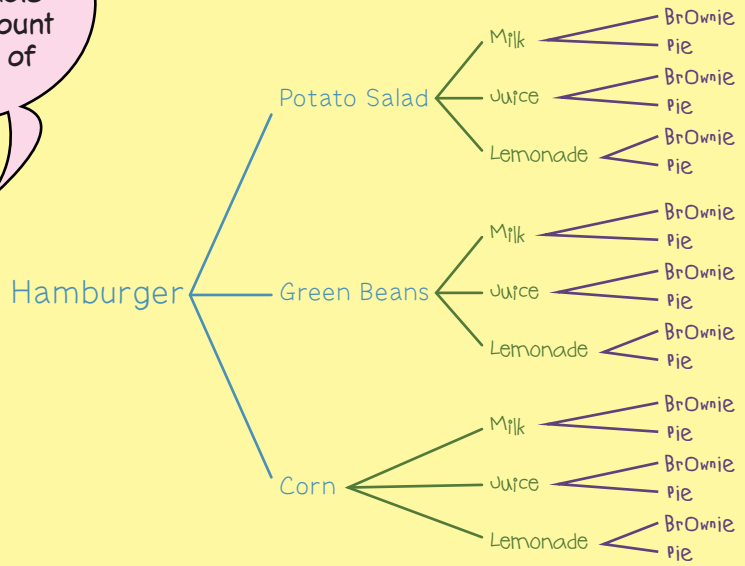
I'll write "brownie" and "pie" next to each of the 18 meals we have so far.

That makes $18 \times 2 = 36$ possible meals.



Wait! We didn't need to draw the whole diagram to count the number of meals.

We could have just multiplied!



I see what she means!

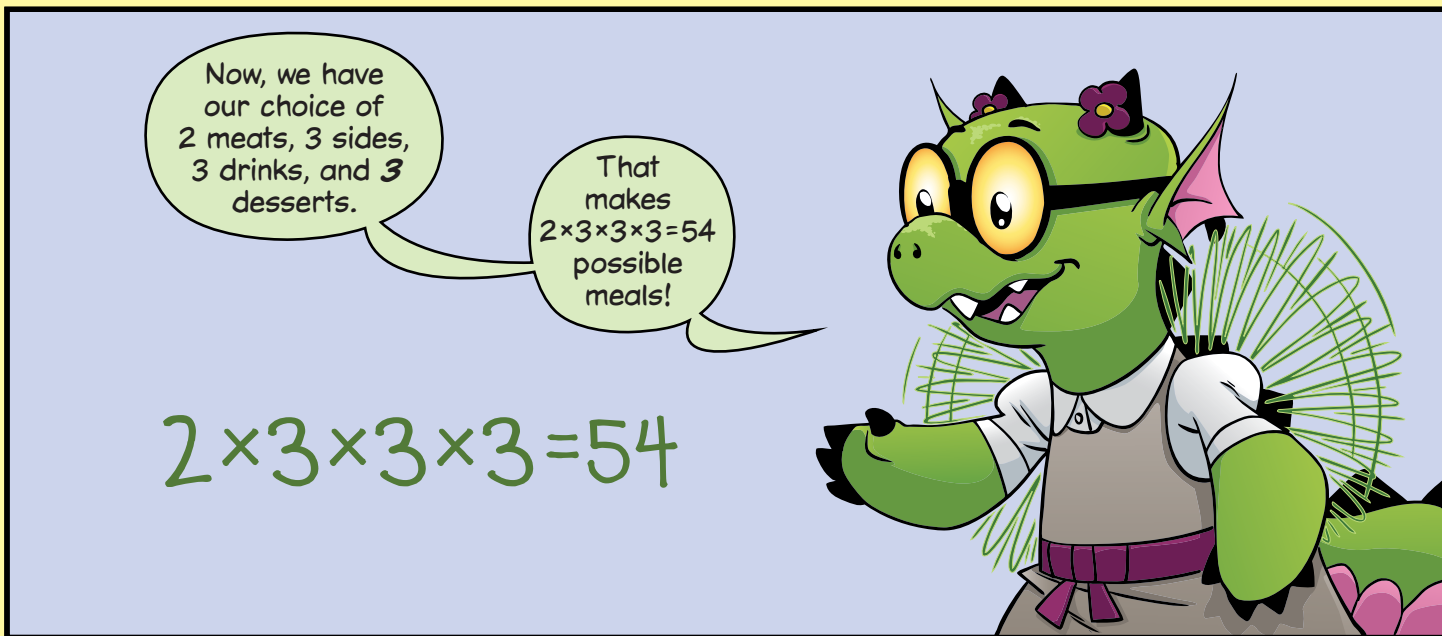
Since there are 2 choices of meat and 3 choices of side, there are $2 \times 3 = 6$ options for meat and a side.

$$2 \times 3 \times 3 \times 2 = 36$$

Times 3 choices of drink makes $2 \times 3 \times 3 = 18$ options for meat, side, and drink!

Times 2 choices for dessert makes $2 \times 3 \times 3 \times 2 = 36$ options for the entire meal!

THIS IS CALLED A **TREE DIAGRAM**. IT IS USED FOR COUNTING POSSIBILITIES, LIKE THE NUMBER OF MEALS YOU CAN MAKE WITH THE GIVEN CHOICES.



Practice: Pages 7-19

