

# The Average Birthday

**Estimated Time: 30-40 minutes**

## SUMMARY

People use “average” to mean something in the middle of a group. There are actually three types of averages that scientists use, though, and knowing which one will help the most is an important skill!

## WHAT YOU’LL LEARN

- The difference between mean, median, and mode.

Materials Used	Resources Used
<ul style="list-style-type: none"> <li>• Paper</li> <li>• Pencil</li> </ul>	<ul style="list-style-type: none"> <li>• Math Antics: Mean, Median, and Mode <a href="https://www.youtube.com/watch?v=B1HEzNTGeZ4&amp;ab">https://www.youtube.com/watch?v=B1HEzNTGeZ4&amp;ab</a></li> </ul>

## WHAT TO DO

1. Write down the ages of everyone in your family: siblings, parents, cousins, grandparents... whoever you want to write down. Thinking about these people as you write them down, who is in the middle of the family? Not the youngest person or the oldest person, but the person (or few people) right in between?
2. It can be hard to get that information by guessing, so let’s calculate it! First, find the *mean* age in your family. Add up all of the ages and divide by the number of people.
3. Look at your list of ages to see if anyone in your family is close to the mean age. There’s a good chance that the mean age is between an older generation (like your grandparents) and a younger generation (like the youngest kids in your family) and it doesn’t actually match up!
4. Try another type of average by looking for the *median* age. Arranging all the ages from youngest to oldest, find the age that’s right in the middle. If there is an even number of ages you’ll have to find the middle two ages and the midpoint between then two.
5. Since you picked someone’s age as the middle one, this time it actually does match up with someone! Is it the person you picked in Step 1?
6. Lastly, let’s find the *mode* age of the group. What’s the most common age in your list? This might be in the middle or it might be older or younger. This isn’t the easiest way to find the middle age in your list but when would you want to use the mode?
7. What’s the average age of the people in your family? More accurately, what is the best type of average to use for your family? There might be different answers depending on what you hope to learn.

## TIPS

- Ages work well like this because they tend to be grouped together into generations. You can see the difference between the mean of the ages and choosing one of the ages to be representative. You can pick other sets of numbers that are similar (times when everyone has meals, shoe sizes by your backdoor) or sets of numbers that are more

evenly spread (weights of things in your fridge, ages of kids in your class). Each situation may call for a different type of average.