



First Name: _____ Last Name: _____ Grade: _____

Teacher: _____ Parent's email: _____

Birthday

Birthdays are celebrated in most culture. We often celebrate birthdays with a gift or a party. In many parts of the world, an individual's birthday is celebrated by a party where a specially-made cake, usually decorated with lettering and the person's age, is presented. The cake is traditionally studded with the same number of lit candles as the age of the individual, or a number candle representing their age.

In this challenge, you are invited to solve math problems that have something to do with age and birthdays. Try to solve as many as you can.

Kinder & First Grade: solve at least 3 problems.
Second & Third Grade: solve at least 6 problems.
Fourth Grade and above: solve at least 12 problems.

Problems

Answer

1. Tamara turns 9 today. She put 5 candles on her cake. How many more candles does she need to put on her cake?

2. The sum of my twin sister's age and my age is 12. How old is my twin sister?

3. My sister is 3 years older than me. The sum of our ages is 13. How old am I?

4. My birthday was yesterday and yesterday was Monday. Tanya's birthday is the day after tomorrow. What day is Tanya's birthday?

5. Diana turned 5 years old on December 5, 2014. In what year was she born?

6. Maya went to a gift shop to buy a present for her friend who is turning 9 years old. Maya picked up a scarf for \$9.50 for her friend and a penguin pen for \$4.50 for herself. If she paid with a \$20 bill, how much money will she get back?

7. For her birthday party, Carla needs 150 paper napkins. A small package of 50 napkins costs \$0.99. A large package of 150 napkins costs \$2.75. How much money would she save by buying the large package of napkins?

8. Ryan is 4 years older than his sisters who are twins, Reanna and Anna. If you add all of their ages together, the sum is 19. How old is Ryan?

9. 7 years from now, Shannon will be 49 years old. This year, the sum of Shannon's age and Paula's age is 93. How old is Paula right now?

10. Annika's sister, Dana, will celebrate her birthday in 20 days. If today is Monday, what day is Dana's birthday?

11. The guests at Tamara's birthday party spent one-fourth of the 2-hour party time eating cake. They played party games 2 times as long as they ate the cake. They spent the rest of the time opening presents. How long did they spend opening presents?

12. Before the birthday party was over, Kay's mom asked Kay, Dan, Matt, Dahlia, Ron, and Joey to take a group picture. They all stood in one row facing Kay's mom.

- There were 4 people standing between Joey and Dahlia.
- Kay was next to Matt.
- Dan was 4 students away from Joey. Ron was next to Dan.
- Matt was second from the left.

Find out who was in the fourth place from the left.

13. It is said that dogs age seven years for every "people year." Justin's dog, Billy, was born on Justin's eighth birthday. When Justin was nine years old, Billy was seven dog years old. In dog years, how old will Billy be on Justin's twelfth birthday? Hint: make an organized list.

14. Disha and Maria were celebrating their birthday together and they had two identical cakes. During the party, each of the two cakes was divided into four equal pieces. Then each of these pieces was divided into three equal pieces. After that each guest at the party got a piece of cake. There were three pieces of cake leftover. How many guests were at the party?

15. Three years from now Joan will be 38 years old. In 13 years, the sum of the ages of Joan and Pricilla will be 83. How old is Pricilla right now?

16. How can you cut a birthday cake in 8 pieces with only three cuts? Hint: one of the cuts will not be a very common way to cut a cake.

17. For her mother's birthday, Jennifer bought a blender. It was on sale for $\frac{1}{3}$ off the regular price. The regular price of the blender was \$72. How much did she pay for the blender, including sales tax of 10%?

18. Annie, Beth, and Cheryl share the same birthday. The sum of the ages of Annie and Beth is 25; the sum of the ages of Annie and Cheryl is 20; the sum of the ages of Beth and Cheryl is 31. Who is the oldest of the three and how old is she?