

# Math Challenge #9

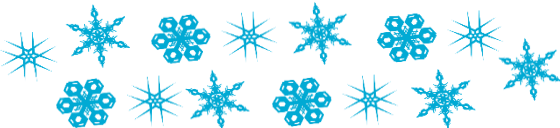







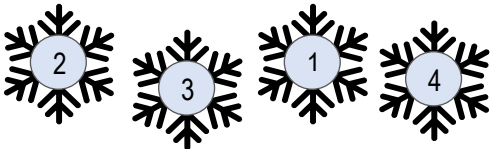






First Name: _____	Last Name: _____	Grade: _____
Teacher: _____	Parent's email: _____	

## Winter Fun Activities

Welcome to Math Challenge #9! The winter season can be super fun when filled with exciting winter activities, and we're bringing that energy to this challenge. Get ready to tackle intriguing problems inspired by cold weather, thrilling winter sports, joyous festivities, and delightful winter puzzles. Each problem is designed to spark your creativity, test your critical thinking, and bring a little winter magic to your math journey. Grab your pencils, put on your thinking caps, and let's dive into the frosty fun. Let the challenge begin!

**Kinder & First Grade: solve at least 3 problems.**  
**Second & Third Grade: solve at least 7 problems.**  
**Fourth Grade and above: solve at least 12 problems.**

	<i>Answer</i>
<p>1. How many unique types of snowflakes are there?</p> <div style="text-align: center;">  </div>	
<p>2. If  +  = 6 and  +  +  = 6, what is the value of  +  = ?</p>	
<p>3. Kyra and Anna are waiting in line to rent ice skates at the Bellevue Ice-Skating Arena. Kyra is standing directly in front of Anna. Kyra turns to Anna and says, "There are 5 kids behind me in the line." Anna replies, "There are 3 kids ahead of me in the line." How many kids are in the line, including Kyra and Anna?</p>	
<p>4. Kyle is keeping track of the amount of snowfall at the ski resort this month. So far it has snowed three times. The first snowfall was only 3 inches. Last week there was a snowstorm that dumped 13 inches. The most recent snowfall was 5 inches. How many inches of snowfall has the resort seen so far this month?</p>	
<p>5. If you pick two random snowflakes, how many different possible sums could you get?</p> <div style="text-align: center;">  </div>	

<p>6. Tara placed penguin stickers on a four-by-four board. If she only wants to have two penguin stickers in each column and two penguin stickers in each row, how many stickers need to be removed?</p>		
<p>7. In a game it is possible to make the following exchanges:</p> <p>    </p> <p>Anishka has 6 igloos. How many sleds will she have if she trades all her igloos for only sleds?</p>		
<p>8. You are hosting a hot chocolate party. Your plan is to make enough hot chocolate for 20 people, and each person will drink 2 cups. Each batch of hot chocolate makes 5 cups. How many batches of hot chocolate will you need to make?</p>		
<p>9. During the winter holidays, Amber went skiing 3 times. Lyron went skiing twice as many times as Diana, who went skiing 2 more times than Amber. In total, how many times have they gone skiing during the winter holidays?</p>		
<p>10. </p>	<p>Jolene makes snowflakes out of paper. She wants to decorate two walls in her room with snowflakes. Each wall would have 9 snowflakes. How many more snowflakes does she need to make if she made 5 snowflakes already?</p>	
<p>11. There are two times as many children as there are adults at the 'Winter Light Magic' festival. If there are 89 adults, how many people are there at the festival?</p>		
<p>12. Mr. Winterbaum's snowmobile shows 78269 miles on its odometer. How many more miles will it be before the odometer again shows a mileage count where each digit is different (non-repeating)?</p>		

<p>13. You are decorating your house with holiday lights. The total perimeter of your house is 120 feet, and each string of lights you bought is 15 feet long.</p> <p>a. How many strings of lights are needed to cover the entire perimeter of your house?</p> <p>b. If each string costs \$10.50, how much will it cost to buy all the strings of lights you need?</p>	<p>a.</p> <p>b.</p>
<p>14. Mrs. Desmond paid \$124.00 for a sled and two identical pairs of snow gloves. The sled cost \$89.00. How much did 1 pair of snow gloves cost?</p>	
<p>15. Snow started falling at 9 PM at a rate of <math>1\frac{1}{2}</math> inches per hour. At what time will the snow be <math>\frac{1}{2}</math> foot deep?</p>	
<p>16. Mt. Rainier camping site has a total of 25 igloos and snow caves for winter camping experiences. One igloo fits 4 people, and 1 snow cave fits 2 people. How many snow caves are there, if there are 70 people camping and all igloos and snow caves are filled to their capacity?</p>	
<p>17. Two friends, Billy and Jared, went snowshoeing. Billy started the trail at 12 PM with a constant speed of 2.5 mph. One hour later, his friend Jared started to move on the same trail at the constant speed of 3 mph. At what time will Jared catch up with Billy?</p>	
<p>18. Anthony and Nathaniel are going on a cross-country skiing trail from the opposite sides. The trail's distance is 7 miles. The boys start skiing towards each other at 11 AM. Anthony is skiing at an average speed of 20 mph, and Nathaniel has a speed of 15 mph. At what time will they pass each other on this trail?</p>	

*Solution is available on February 7, 2025*

[www.mathinaction.org](http://www.mathinaction.org)

The student registration for 2025 Math Challenge Tournament® is now open. Registration and locations information can be found at:

<https://www.ellipsisacademy.com/2025-mct-students-registration.html>.

For tournament format, levels/divisions, and sample problems, please visit [2025 Math Challenge Tournament](#).