

Math Challenge #6



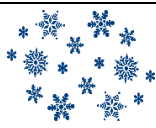












First Name: _____	Last Name: _____	Grade: _____
Teacher: _____	Parent's email: _____	




Winter Season

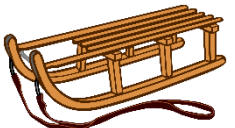

Welcome to Math Challenge #6. Let's embark on a mathematical journey inspired by the enchanting season of winter. Did you know that the winter solstice, which marks the official start of winter, is the day with the fewest hours of sunlight in the entire year?


As we dive into this challenge, we'll explore the wonders of winter, from the brisk, crisp air to the delicate beauty of snowflakes and the warmth of holiday celebrations. We invite you to gather your family—parents, siblings, and grandparents—and join us in solving these wintery math problems. Together, let's embrace the mathematical magic of this captivating season!

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>
1.	Rishaan was reading a book about snowflakes. He read from the beginning of page 5 to the end of page 9. How many pages of the book did Rishaan read?	
		
2.	Solve the mystery number under each snowflake.	
a.	$5 + 2 = $ 	<i>a.</i>
b.	$5 + $  $= 9$	<i>b.</i>
c.	 $+ 8 = 11$	<i>c.</i>
d.	$4 + $  $= 11$	<i>d.</i>
3.	A group of children stood in a line for a free hot cocoa. Aidan was the 4 th from the front of the line and was the 3 rd from the end of the line. How many children were standing in line?	
		
4.	Find the sum of  and  .	
a.	$13 - $  $= 6$	
b.	 $- 3 = 8$	
 $+$  $=$ _____		
5.	<div style="display: flex; align-items: center;">  <div> <p>Larissa has a task to plate cookies that her mom baked. Her mom baked chocolate chip cookies, sugar cookies with coconut icing, gingerbread cookies, heart shape cookies, sugar cookies with chocolate in the center, and wreath-shape butter cookies. She needs to place 4 cookies of each type on each plate. How many cookies are supposed to be on each plate?</p> </div> </div>	

6.		<p>During the month of December, there are 3 students who are turning 8 years old in Mrs. Ilac's class. Joon's birthday is three days before Kamia's. Tristan's birthday is two days after Kamia's. If Tristan's birthday is on Sunday, December 17, on what day of the week is Joon's birthday this year? Hint: Create a table labeled with the days of the week.</p>	
7.	<p>If Farah gives Maha 6 snowballs, Maha will have the same number of snowballs as Farah. How many snowballs did Farah have initially if they have 20 snowballs altogether?</p>		
8.		<p>Amazing Dimes Store is having a sale on the latest hot toy that is notoriously hard to get a hold of. While waiting in line for the store to open and the sale to begin, Jose notices that his friend Santos is ahead of him and that there are only 5 people ahead of Santos. If there is a total of 38 people in line, and 15 of those people are behind Jose, how many people are between Jose and Santos?</p>	
9.	<p>Grandpa Tedjo wants to buy sleds for his grandchildren. If the cost of a sled is \$35, and he has \$200 to spend, how many sleds can he purchase?</p>		
10.	<p>A family is ending their winter vacation with a tight schedule. On the last day of their vacation, they would like to visit three different attractions. The travel time from the hotel to the first attraction is 1 hour, from the first attraction to the second attraction is 45 minutes, and from the second to third attraction is $1\frac{1}{4}$ hours. From the last attraction, it takes only 30 minutes to get back to their hotel. If they want to spend 4 hours at each attraction and need to return to their hotel at 10 p.m., what time should they leave for the first attraction?</p>		
11.	<p>Emily is running a snow stand. She sold 15 snowballs for \$1.50 each and 20 snow cones for \$2.25 each. After paying \$10 for supplies, how much profit did she make? <i>Profit is the difference between the amount earned and the amount spent on buying or producing something.</i></p>		

12.		<p>Koji wants to save money for a sled that costs \$70. He decides to save one-third of his weekly allowance and contributes it to the sled fund. If his weekly allowance is \$24 and he starts with no money in his sled fund, how many full weeks will it take until he can buy the sled?</p>	
13.	<p>In a sled race, Emma, Daniel, Nicole, and Dylan all start at the same point but take different paths down a hill. Here are the details:</p> <ul style="list-style-type: none"> • Emma sleds a 250-meter path and finishes in 45 seconds. • Daniel sleds a 210-meter path and completes it in 35 seconds. • Nicole sleds a path that is 5 meters longer than Daniel's but finishes at the same time as Daniel. • Dylan sleds a 200-meter path, and he completes it in 30 seconds. <p>Rank them in order of their speeds from fastest to slowest.</p>		
14.	<p>In a winter sports relay race, there are four team members: Anya, Bella, Chelsea, and Dom. They each take turns skiing a designated distance. Anya skis $\frac{1}{5}$ of the total distance, Bella skis 1.5 miles, and Chelsea and Dom share the remaining distance. Dom skis 1.5 times the distance covered by Chelsea. If the total distance for the relay race is 15 miles, how much distance does each team member ski?</p>		
15.	<p>A snowplow clears a road of snow in 4 hours. A second snowplow, which is twice as efficient, clears the same road in 2 hours. Assuming they work at the same pace as before, how long will it take to clear the road with both plows working together?</p>		
16.	<p>Gearing toward Christmas this year, James worked hard and earned \$1728 during the month of November. He was paid \$18 per hour. He did not work more than five hours a day, nor did he work on Sundays. He also worked a whole number of hours. If he worked the same number of hours each day, how many hours per day and how many days did he work?</p>		

17.	 <p>A snowstorm lasts for 24 hours, and the rate of snowfall varies throughout the day. The snow falls at a rate of 1 inch per hour for the first 8 hours, 1.5 inches per hour for the next 6 hours, and 2 inches per hour for the final 10 hours.</p> <p>a. How many inches of snow has fallen during the snowstorm?</p> <p>b. What was the average rate of snowfall during the 24-hour period?</p>	<p>a.</p> <p>b.</p>
18.	<p>Zainab and Brianna collect seashells. Zainab began a holiday with 365 shells and Brianna began with 23 shells. On each day of the holiday, Zainab found 21 shells and Brianna found 59 shells on the beach. By the end of the holidays, they had the same number of shells in total. How many days long was the holiday?</p>	

Solution is available on January 5, 2024
www.mathinaction.org