

Math Challenge #6

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

Winter Wonderland

Welcome to Math Challenge #6. This math challenge has math problems involving things we experience in winter such as cold weather, holiday treats, and fun winter activities etc.

If you are new to any of the problem solving strategies, check out our complete overview of elementary problem solving strategies at <https://www.mathinaction.org/problem-solving-strategies.html>.






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.


Answer

<p>1. Raja is playing pretend. He is a storekeeper and selling 5 items as follow:</p> <div style="display: flex; justify-content: space-around; align-items: center; text-align: center;"> </div> <p style="margin-top: 10px;">If Ananya wants to spend exactly \$10, which 2 items should she buy?</p>	
<p>2. We wanted to go skiing for the weekend, but we weren't sure if it was going to snow. As it turns out, we got plenty of snow. It snowed five inches on Wednesday, ten inches on Thursday, and twelve inches on Friday. How many inches did it snow in all?</p>	
<p>3. Malia can knit a scarf in four hours. She wants to make a scarf for each of her three friends, Bianca, Mona and Tayshaun. How many hours will it take her to knit them?</p>	
<p>4. Quentin made a snowman out of three balls of snow. The smallest one for the head weighed 6 pounds, the second ball of snow weighed 9 pounds, and the largest ball of snow weighed 23 pounds. How much did Quentin's snowman weigh?</p>	
<p>5. Find the value of the question mark below.</p> <div style="margin-bottom: 10px;"> - = 1 </div> <div style="margin-bottom: 10px;"> + = 6 </div> <div style="margin-bottom: 10px;"> + + = 12 </div> <div> + + = ? </div>	

6. It was kind of warm when Oleg got up this morning. It was 62°F . He knew that it was going to get colder during the day, so he took his coat to school with him. When he got out of school, the temperature had dropped by 13°F . What was the temperature when Oleg got out of school?

7. A **Pictograph** is a way of showing data using images. Each image stands for a certain number of things. Below is a pictograph about the number of sledding trips of 5 children.

Name	Number of sledding trips down the hill
Galina	
Tara	
Milo	
Boris	
Tamara	




 = 4 sledding trips  = 2 sledding trips

- How many sledding trips did Boris and Tamara take down the hill altogether?
- How many more sledding trips down the hill did Milo take than Galina?




a.
b.

8. An icicle was 3 inches long on Monday morning at 6 a.m. It melted 1 inch during the day and grew 2 inches during the night. At 6 a.m. in the morning the pattern continues. On which day of the week in the morning time (6 a.m.) would the icicle be 7 inches long?

9. Look at the multiplication table below.

Find the value of the following: , , and .



			3
2			
		25	
	48	30	




 = _____
 = _____
 = _____





10. Amelia and her sister like to ride their sled down the hill by their house. They always try to see how far they can ride it before it stops. Yesterday, they tried it three times. The first time, they rode it 138 feet and 4 inches. The next time, they rode it 12 feet and 6 inches farther than their first try. The last time, they rode it 131 feet and 2 inches. How far did they ride it all together? State your answer in feet and inches.




11. Hameed’s school group went skiing over the holiday break. They had so much fun, and they got to stay in hotel rooms for 2 nights at the ski resort. Each room cost \$164.00 per night. They had 6 rooms, each with exactly 4 people in it. If the total bill for the hotel rooms were split evenly among them, how much does each person have to pay?

12. Find the value of the question mark below.



 $= 1$


 $+$

 $+$

 $= 46$


 $+$

 $+$

 $+$

 $= 74$



 $+$

 $+$

 $= ?$

13. Starting with the letter S on the top and only moving one letter at a time downward to the left or right, how many different paths from top to bottom spell SNOW?

S
N N
O O O
W W W W

14. Woodin City is preparing for their annual winter festival. They plan to decorate their park with 159 strings of lights and each string of lights has 25 bulbs. It is expected to take 15 hours to decorate over the course of the week. On average, how many bulbs are going to be hung each hour?

15. Arjun and his family are flying from Boston to London for winter break. When it is 7 a.m. in Boston, it is noon in London. A plane leaves London at noon London time and arrives in Boston at 3 p.m. Boston time the same day. Arjun and his family are taking the plane that leaves Boston at Noon, Boston time, heading to London. Assuming both planes fly for the same number of hours, what time in London will it be when Arjun and his family arrive in London?

<p>16. Anushka can shovel snow at the rate of 20 cubic feet for the first hour, 19 cubic feet for the second, 18 cubic feet for the third, etc. Notice that she always shovels one cubic feet less per hour than the previous hour. Her driveway is 8 feet wide, 5 feet long, and covered with 3 feet deep snow. To the nearest hour, how long it will take her to shovel it clean?</p>	
<p>17. Two friends are making a snowman. If they have 5 different hats, 3 different sets of eyes, 2 different sets of noses, and 7 different colored scarves, how many different ways could they decorate the snowman?</p>	
<p>18. Gwyneth wanted to buy her first snowboarding equipment. If the snowboarding equipment she wanted was sold at a discount of 15%, she would need \$80 more than she had. If the equipment was sold at a discount of 20%, she would have \$120 left. How much money did Gwyneth have?</p>	

Solution is available on January 6, 2023
www.mathinaction.org