

Math Challenge #3



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

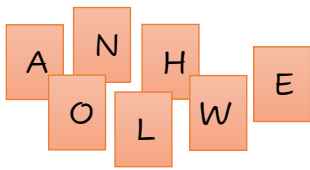

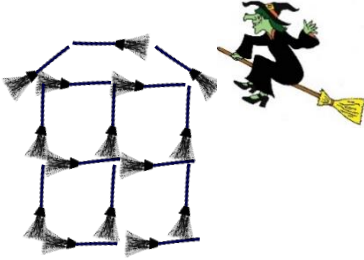

Halloween

Welcome to Math Challenge #3. In this challenge, you will explore Halloween math problems. Halloween is a holiday with a long history and can have different meanings for different people. The name Halloween is a shorter version of All Hallows' Eve or the night before All Saints Day. It can be thought of as a celebration of the night before All Saints Day. Halloween takes place on October 31.

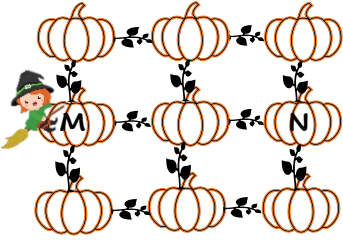
Many of the problems in this challenge can be solved by drawing a picture/diagram/model and/or using logical reasoning. If you are new to any of the problem-solving strategies, check out our complete overview of elementary problem-solving strategies at <https://www.mathinaction.org/problem-solving-strategies.html>.

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

1.	<p>Manisha has 7 cards with letters as shown below. Which two additional cards does she need in order to make the word HALLOWEEN?</p> <div style="text-align: center;">  </div>	
2.	 <p>A rectangle is partly hidden behind a Halloween curtain. What is the shape of the hidden part?</p>	
3.	 <p>Manit built a house using witch's brooms as in the picture. How many brooms did he use?</p>	
4.	<p>In a local gift shop, a set of pumpkins (consisting of one small, one medium, and one large pumpkin) is on sale for \$20. If bought separately, the small pumpkin costs \$6, the medium pumpkin costs \$8, and the large pumpkin costs \$10. How much cheaper is it to buy the set of pumpkins than buying the pumpkins separately?</p>	

5. Four friends went trick-or-treating. Mike got more candies than Francine. Jared got more candies than Victor and Jared got less candies than Francine. List the friends in order according to the number of candies they got, starting with the largest number of candies.

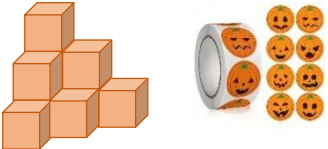
6.  Glenda the Witch can move from one pumpkin to the next only if they are connected by a vine. She cannot move into any pumpkin more than once. She starts from Pumpkin M and makes exactly 4 moves to get to pumpkin N. In how many different ways can Glenda the Witch do this?

7. Given that $\text{pumpkin} + \text{pumpkin} + 6 = \text{pumpkin} + \text{pumpkin} + \text{pumpkin} + \text{pumpkin}$, what number can replace the pumpkin ?













8.  A 40-minute orange light show at the haunted house began at 8:50 pm. Exactly in the middle of the show, the lights went out. At what time did the lights go out?

9. A sign at the candy store says, "Half-off, today only." As a result, half-pound packages of candy are only \$4 per package. What is the regular price for one pound of candy?

10. Jose wrote "**Halloween Festival in Eekville**" on a poster. For each unique letter, regardless of whether it is a capital or a lower case letter, a unique color is used. How many different colors did he use?

11. Ming built a structure using 10 cubes and placed it on the table. He then put a pumpkin sticker on each of the exposed faces of the cubes, but not on the ones that are in contact with the table. How many stickers did Ming use? 

12. At Winnie the Spooky Festival, all attendees dressed up to celebrate Halloween. Nine times as many attendees dressed up as spooky creatures as non-spooky creatures. If the total number of attendees is 140, how many of them dressed up as spooky creatures?

<p>13. James baked a total of 156 Halloween cookies. There were 3 shapes of cookies: pumpkin, candy corn and bat. 110 were either pumpkin or candy corn cookies. The total number of pumpkin cookies and bat cookies was 94. How many cookies were pumpkin cookies?</p>	
<p>14. Grandma Jean gave Valerie and Moritz some red and green apples. In total, they had 25 apples. On the way home, Valerie lost 2 green apples. She also ate one red apple and 1 green apple. Moritz ate 3 red apples and 2 green apples. When they got home, they counted the remaining apples and discovered they had exactly the same number of red apples as green apples. How many green apples did Grandma Jean give them?</p>	
<p>15. Peter had a 6:00 pm Halloween party to attend that was 60 miles away from his house. He drove from his house at an average rate of 40 mph and arrived 15 minutes late. At what time did Peter leave his house?</p>	
<p>16. The symbols , , and  represent three different digits.</p> <p>If you add the digits of this three-digit number, , the result is this two-digit number: . If you add the digits of this two-digit number, , you get a one-digit number, .</p> <p>Which digit does  represent?</p>	
<p>17. Half of Ilse's candies is 8 less than one-fifth of Martha's candies. They have a total of 173 candies. How many candies does Martha have?</p>	
<p>18. After going trick-or-treating around the neighborhood, Moritz and Wendla counted their candies. Together, their total number of candies was 100. The sum of 25% of Moritz's candies and 75% of Wendla's candies was 35. Find the number of candies Moritz had.</p>	

Solutions are available on October 25, 2024
www.mathinaction.org