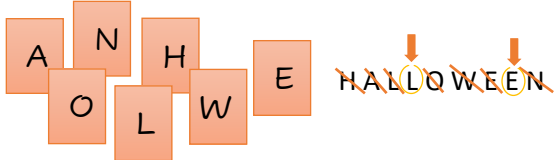
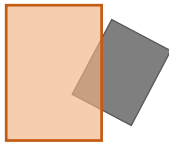
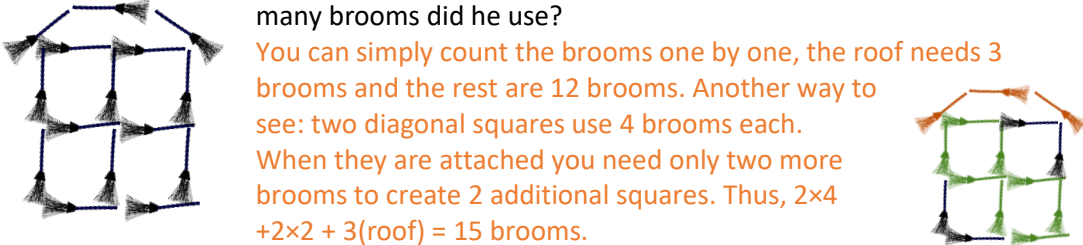
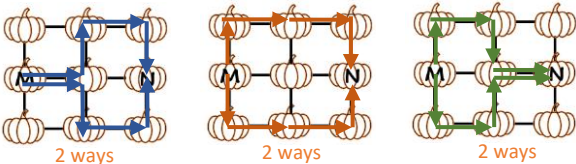


Math Challenge #3

Halloween

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.	<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> 	<i>L and E</i>
2.	<p>A rectangle is partly hidden behind a Halloween curtain. What is the shape of the hidden part?</p> 	<i>A triangle</i>
3.	<p>Manit built a house using witch's brooms as in the picture. How many brooms did he use?</p> <p>You can simply count the brooms one by one, the roof needs 3 brooms and the rest are 12 brooms. Another way to see: two diagonal squares use 4 brooms each. When they are attached you need only two more brooms to create 2 additional squares. Thus, $2 \times 4 + 2 \times 2 + 3(\text{roof}) = 15$ brooms.</p> 	<i>15</i>
4.	<p>$\\$6 + \\$8 + \\$10 = \\24. It will be $\\$24 - \\$20 = \mathbf{\\$4}$ cheaper to buy the set.</p>	<i>4 [dollars] or \$4.00</i>
5.	<p>Mike, Francine, Jared, Victor</p>	<i>Mike, Francine, Jared, Victor</i>
6.	<p>$2 + 2 + 2 = 6$ ways</p> 	<i>6</i>
7.	<p>Think about the picture as the balancing scale. All pumpkins are the same. So, you can remove two pumpkins from each side and the balance will be still intact. Now you are left with 2 pumpkins equal 6, therefore 1 pumpkin equals 3.</p>	<i>3</i>
8.	<p>The middle of the show is 20 minutes after it started, which was at 9:10 p.m.</p>	<i>9:10 p.m.</i>
9.	<p>A half-pound package costs \$4 at the sale price, so it would cost \$8 at the regular price. One pound would then cost \$16 at the regular price.</p>	<i>\$16</i>
10	<p>List the different letters used: H, A, L, O, W, E, N, F, S, T, I, V, K \rightarrow 13 colors</p>	<i>13 [colors]</i>

