

"Math Is Cool" Championships — 2020-21

4th Grade — March 24, 2021

Sponsored by: Avista Utilities

Team Contest

1	Walker and ten of his closest friends are having a snowball fight on New Year's Day. They have prepared 6446 snowballs to share equally among the 11 children. How many snowballs will each child get to throw?
2	Emily, who is COVID positive, exposed three classmates at a Valentine's Day party. Each of those classmates exposed seven family members. How many total people were exposed to COVID by Emily (not counting Emily)?
3	Biff and Eho are preparing for the Mathville Annual Easter Egg Hunt. They have a bin with 500 Easter eggs. There are at least 20 of each of the following colors of eggs: red, orange, yellow, green, blue, and purple. If Biff reaches in blindfolded, how many eggs does he need to pull out to be guaranteed to have two eggs that are the same color?
4	Limin is practicing for the annual 4 th of July bike race on a standard high school track that is one-fourth of a mile around. Limin rides his bike at an average rate of 22 miles per hour. How many trips around the track would Limin make if he rides his bike at this steady rate for one hour?
5	Grace and her best friend decide to prank their whole class for April Fool's Day. They bought 19 whoopee cushions for \$5 each, 7 books of Mad Libs for \$4 each, and 9 packs of trick rubber pencils for \$3 each. Grace and her friend split the cost evenly between themselves. How much did Grace have to pay for her half of the supplies?
6	This year, the Mathville Mayor declared that summer begins at 12 AM on Memorial Day (May 31) and ends at 11:59 PM on Labor Day (September 6) How many summer days are there this year in Mathville?
7	Brycen's extended family is having a large Thanksgiving feast that consists of 48 dishes, including desserts, appetizers, side dishes, drinks, and main dishes. One-third of the dishes are desserts. There are half as many appetizers as there are desserts. There are 3 times as many main dishes as drinks. There are the same number of side dishes as appetizers. How many main dishes are there at Brycen's Thanksgiving dinner?

8 It's your birthday and your Grandpa sent you the following clues to figure out the number of dollars inside your gift. How many dollars are inside your gift?

$$\text{Blue Star Hat} \times \text{Blue Star Hat} \times \text{Blue Star Hat} = 64$$

$$\text{Blue Star Hat} + \text{Blue Star Hat} - \text{Red Dot Hat} = 2$$

$$\text{Yellow Striped Hat} + \text{Yellow Striped Hat} - \text{Blue Star Hat} - \text{Red Dot Hat} = 6$$

$$\text{Red Dot Hat} + \text{Yellow Striped Hat} + \text{Yellow Striped Hat} - \text{Blue Star Hat} = \text{Gift Box}$$

9 In Candyville, each house gives 3 pieces of candy to children who are trick or treating (or they don't give out candy at all). Eva can go trick-or-treating in only one neighborhood on Halloween. In West Candyville, she can visit 10 doors every 20 minutes, but 1 out of every 6 doors she visits will not be handing out candy. In East Candyville she can visit 12 doors every 15 minutes, but one out of every 4 doors is not handing out candy. What is the highest number of pieces of candy Eva can receive after 1 hour of trick-or-treating?

10 Millions of clovers are spread evenly across St. Patrick's Meadow where 1/12 of the clovers have 4 leaves while the rest of the clovers have 3 leaves. Larry the Leprechaun counts a total of 156 clovers inside a 6 inch by 6 inch square of meadow. How many 4 leaf clovers would he expect to find in an 8 foot by 8 foot square of meadow?