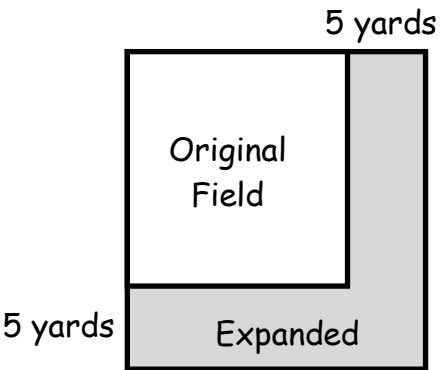


"Math Is Cool" Championships — 2019-20

4th Grade — February 28, 2020

Team Contest

1	Zara is walking at a steady pace of $2\frac{1}{2}$ miles per hour. After 4 hours, how many miles has Zara walked?
2	Eric was doing a mental math problem, in which he was to subtract 6 from a certain number and then multiply the difference by 7. However, Eric mixed up the order and first multiplied by 7, then subtracted 6, getting 22. What was the correct answer to the math problem?
3	What is the remainder when 123,456,789 is divided by 9?
4	The Arctic is warming at a rate of 0.225°C every 6 months. If it warms at a constant rate, how much will the Arctic warm in five years?
5	What is the surface area, in square centimeters, of a right rectangular prism with edges measuring 3 cm, 6 cm, and 2 cm?
6	Grace and Lily are throwing darts at a target. If Grace has a 60% chance of hitting the target, and Lily has a 50% chance of hitting the target, what is the probability that they both hit the target? Answer as a percentage.
7	What is $\frac{5}{6}$ of $\frac{1}{2}$ of $\frac{4}{5}$ of 15?
8	A palindrome is a number that reads the same backwards and forwards. For example, 1221 is a palindrome. What is the product of the third largest 3-digit palindrome and the smallest 2-digit palindrome?
9	A lemonade pitcher contains 370 milliliters (mL) of lemonade. You have cups that can hold 310 mL, 260 mL, and 170 mL. You pour all of the lemonade into the three glasses so that each glass is filled to the same fraction of the cup capacity. What volume of lemonade did you pour into the smallest of the cups?
10	Two sides of a square field are increased by five yards, as seen in the diagram. This causes the area of the field to increase by 155 square yards. Find the area of the original field in square yards.  The diagram shows a square labeled "Original Field". Two adjacent sides of this square are extended outward by 5 yards each, creating a shaded L-shaped region labeled "Expanded". The horizontal extension is labeled "5 yards" and the vertical extension is also labeled "5 yards".