MATHCOUNTS® Problem of the Week Archive

Labor Day – September 7, 2015

Problems

Labor Day is a product of the American labor movement and is dedicated to the social and economic achievement of American workers. In honor of this day and the American worker, let's solve some Labor Day themed math problems!

At the height of the Industrial Revolution the average worker in the United States was working 12 hours per day, 7 days per week. In 1836, the labor movement started calling for a reduction to 8 hours per day. The Adamson Act, passed in 1916, made the 8 hour work day official and required overtime compensation for anything additional. Now the average worker in the United States works 8 hours per day, 5 days per week. What is the absolute difference between the average number of hours worked over the course of a year, 52 weeks, by a worker during the Industrial Revolution and by a worker today?

A minimum wage for workers became a federal law in 1938. At the time the wage was set at $0.25 per hour. Adjusted for inflation, this wage would equal about $4.13 per hour today. Today the federal minimum wage is $7.25 per hour. Using the adjusted wage of $4.13, what is the percent increase in the minimum wage from 1938 to today? Express your answer to the nearest tenth.

The first Labor Day was celebrated on Tuesday, September 5, 1882. The second celebration of Labor Day was on Wednesday, September 5, 1883. In 1884, a leap year, Labor Day was formally established as the first Monday of September. What was the date of the fifth celebration of Labor Day in 1886?