



## Choosing the Shelburne Crew

At the Shelburne station a conductor with the Toronto, Grey and Bruce Railway had to choose a special two-person crew to run a locomotive equipped with a snowplow. He had five people to choose from, each of different ages. If the older person in a crew must always be the one in charge, how many different crews can the conductor make up from this group of five?

## Once More on the Sidewalk in Orangeville

$\begin{array}{r} 22 \\ \hline 9715 \end{array}$	$\begin{array}{r} 21 \\ \hline 8274 \end{array}$
$\begin{array}{r} 16 \\ \hline 9115 \end{array}$	$\begin{array}{r} 17 \\ \hline 6254 \end{array}$

The mysterious person who uses coloured chalk to write puzzles on the sidewalk in front of Lanny's parents' store on Broadway has struck again.

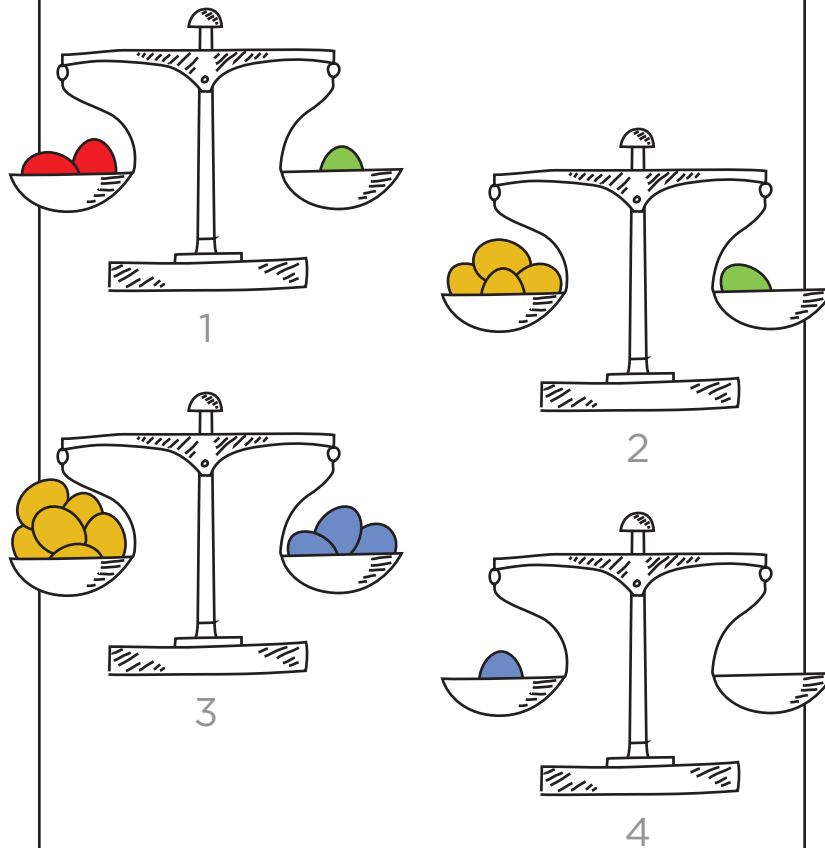
Of course Lanny washed it off but not before she noticed a relationship between the numerator and denominator of each fraction and replaced the question mark with the correct answer.

What was Lanny's answer?

$\begin{array}{r} 23 \\ \hline 5792 \end{array}$	$\begin{array}{r} ? \\ \hline 7038 \end{array}$
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## Balancing Imaginary Eggs at the Bolton Fair

A contest designed by senior students at the Albert Street School was set up in the poultry barn at the Bolton Fair. On a sheet of poster board the students had drawn four identical balance scales. The scales held imaginary eggs of the same size but different weights and different colours.



On the first scale, for example, the students drew two imaginary red eggs in the left pan that balanced exactly with one imaginary green egg in the right pan. The second and third scales, each with different coloured imaginary eggs, were in perfect balance too. The fourth scale, however, had an empty pan. The students' challenge to fairgoers was to use the information from Scales 1, 2 and 3, to figure out how many red eggs are needed to put Scale 4 in perfect balance.

## Mr. Stuart's "Little Toughies"

Mr. Stuart, the teacher at S.S. #15 Mulmur in Kilgorie, had a reputation for doing things his own way so none of the students in the Senior Fourth class was surprised when he invented some arithmetic challenges that were not part of the Ontario curriculum. These challenges came to be called "Little Toughies" by students at S.S. #15. The one below is a typical example.

Use the clues below to find what number from 1 to 9 is represented by each letter in this grid.

A	B	C
D	E	F
G	H	I

### Clues

Each of the nine different letters stands for one of the numbers from one to nine. (No letter does double duty.)

One row of letters represents consecutive odd numbers in descending value from left to right.

One column of letters represents consecutive numbers in descending value from top to bottom.

A is smaller than H and bigger than B.

Squaring the number H represents will produce the number represented by D.

## AN IN THE HILLS MINI MYSTERY



## In the Orchard

As she turned off the 5th Line, Mary Ritchie realized that the last time she'd driven down this particular farm laneway the Town of Mono was still a township. So she was quite surprised to see the old farmhouse hadn't changed at all. In fact, very little of the property she used to visit as a young girl had changed. The barn in back was still there and still red, and even the yard still looked the same. In fact the only indication that she wasn't stepping back in time was the tall man sitting in a lawn chair in the orchard on the west side of the house. He was eating an apple and as Mary approached him he fixed her with a dark, cold stare.

"You're the detective they said would be coming." He reached down without releasing Mary from the stare, picked up another apple and took a bite. "Outstanding crop this fall," he said, his eyes still boring straight at her, challenging her to respond. "I was born on a farm like this. Lived all my life in the country and don't remember an apple crop this heavy in a long time." He waved at an empty lawn chair. "Why don't you sit down?" he said. "Have an apple."

Deliberately, Mary turned away to look at the farmhouse. For what she knew was a rude space of

time she peered at a peculiar stain on the ledge of a window. She knew from memory the kitchen was behind that window. "Actually, I'll stand for a while," she said finally, turning to face the stare again. Then after a second or two her gaze returned to the window. She was fishing for time to plan a strategy. Her assignment was to question this man, a murder suspect, and already, before she'd even asked a question, she knew he didn't tell the truth.

What has led Mary Ritchie to believe this man does not tell the truth?