Primary Solutions

MASTERY

1) Santa has parked his sleigh and locked it up, but he has forgotten the codes to the locks! Use the clues below to help him unlock them and deliver the presents. Each code has 4 digits.

a) The first digit multiplied by the second digit is 8. All the digits are even. The second digit is the biggest. The digits have a combined total of 10.
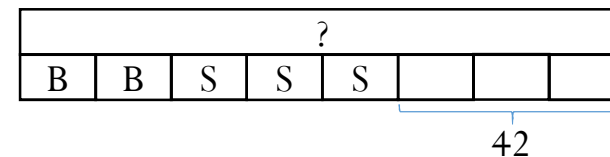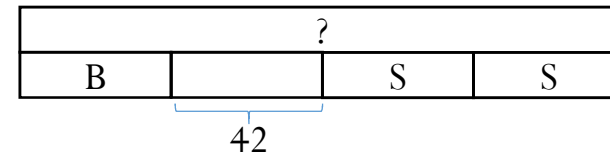
b) The second digit is double the fourth digit. The last digit is an odd number that is more than 1. The third digit is greater than the last digit. It is a factor of 21. The first digit is the smallest and is also a square number.

c) The third digit is a square number. It is half of the second digit. The product of the second and fourth digit is 40. The digits add up to 23.

2) Santa has three towns left to deliver presents to. He delivers $^1/_4$ of the presents to Baublesville and half of what he then has left to Snowtown. He has 42 presents left to deliver. How many did he have before his last three deliveries?
What answer does each bar model give? Which one is correct and why?

?			
B		S	S

42

?						
B	B	S	S	S		

42

3) Rudolph counts the presents in the sleigh. He says the number rounds down to 3000 when rounded to the nearest thousand. When rounding to the nearest hundred, the answer is 13 more than the actual number. What could the number be?
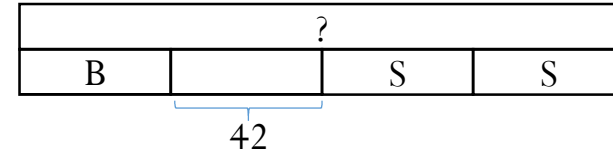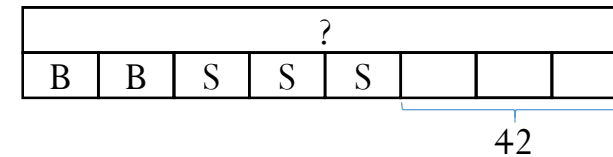
1)

a)

2 4 2 2

b)

1 6 7 3

c)

6 8 4 5

2)

	?		
B		S	S

42

This bar model gives an answer of 168 (4 x 42)

	?					
B	B	S	S	S		

42

This bar model gives an answer of 112 (42 ÷ 3 =14 and 8 x 14 = 112)

The second answer is correct. The first one suggests it is half of the presents to Snowville, but it was half of the remaining presents after delivering to Baubleville.

3) There are 5 possibilities:

3087, 3187, 3287, 3387, 3487