

12 Days of ChrisMATH — Day 4

Santa's Algebra

Level 1

Solve for the value of each holiday icon:

$$\begin{aligned} \text{Santa} + \text{Tree} + \text{Reindeer} &= 22 \\ \text{Santa} - \text{Reindeer} &= 3 \\ \text{Reindeer} + \text{Tree} &= 13 \end{aligned}$$

You submit the result of:  $-$  $+$ 

Level 2

The North Pole logic is getting tougher! Find the new values:

$$\begin{array}{rcl} \text{Santa} + \text{Tree} + \text{Reindeer} & = & 26 \\ \text{Tree} - \text{Santa} & = & 2 \\ \text{Santa} + \text{Reindeer} + \text{Reindeer} & = & 18 \end{array}$$

You submit the result of: $(\text{Tree} \div \text{Reindeer}) + \text{Santa}$

Level 3

The Candy Canes have arrived! Solve for all four icons:

$$\text{Santa} + \text{Tree} + \text{Reindeer} + \text{Candy Cane} = 32$$

$$\text{Candy Cane} - \text{Santa} = 1$$

$$2 \times \text{Tree} + \text{Reindeer} = 20$$

$$\text{Candy Cane} + \text{Reindeer} - \text{Tree} = 9$$

You submit the result of: $(\text{Candy Cane}^2) - (\text{Santa} + \text{Tree} + \text{Reindeer})$