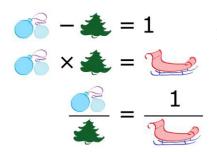
## **Mystery Number Puzzle**

2 December 2023

Jim Stevenson



This is a slightly different mystery number puzzle from the December 2023 MathsJam Shout. It provides a simpler puzzle as a respite from the more challenging problems.

Figure 1

## **Solution**

For ease of typing, make some letter substitutions for the cartoons as shown in Figure 1. Then the three equations become

$$B - T = 1$$

$$B \times T = S$$

$$B/T = 1/S$$

Then we have

$$B = T + 1$$

$$S = (T + 1) \times T$$

$$(T + 1) / T = 1 / (T + 1) \times T$$

Assuming  $T \neq 0$ , we have

$$(T + 1)^2 = 1 \implies T = 0, \text{ or } -2 \implies T = -2$$

Therefore, B = -1 and S = 2.

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https://mathsjam.com/shout/MJShout.pdf (This link only provides the December version throughout the month.)