



Deep Space Telemetry Decryption

Solve the algebraic systems of planetary symbols to bypass the corrupted telemetry lock and download the star chart coordinates.

Name: _____ Date: _____

1 THE KEY

$$\begin{array}{l} \text{⚡} = \square \quad \text{①} = \square \quad \blacklozenge = 17 \quad \blacklozenge = -4 \quad \blacksquare = -2 \\ \text{☾} = \square \end{array}$$

Every symbol is a whole number from -9 to 20 (some are negative!). A number in front of a shape means multiply: 2 stars = 2 x star. A small 2 after a shape means square it: star² = star x star.

2 FIND THE MISSING VALUES

Some shapes in the key are missing. Use these to work them out, in order, and write them into the key.

$$\text{☾} \times \blacklozenge = -12$$

$$\text{⚡} + 1 = -4$$

$$2 \bullet + \text{☾} = 1$$

3 CRACK THESE

$$1. \text{⚡} - \blacksquare = \square$$

$$2. (\blacksquare + \text{☾}) \times \blacklozenge = \square$$

CODE 1

$$3. \blacklozenge^2 - \blacksquare = \square$$

$$4. 3 \text{☾} - 2 \blacklozenge + \blacksquare = \square$$

CODE 2

$$5. \text{⚡} \times \blacklozenge = \square$$

$$6. \blacklozenge \times \bullet - \text{☾} = \square$$

CODE 3

$$7. \blacklozenge \times \text{⚡} - \blacksquare = \square$$

$$8. \blacklozenge - \text{⚡} - \blacklozenge = \square$$

CODE 4

$$9. \bullet^2 + \blacksquare = \square$$

$$10. 3 \bullet - 2 \blacklozenge + \text{⚡} = \square$$

4 THE VAULT CODE

Write the ONES digit of your answers to problems 2, 4, 6, 8 (the ones tagged CODE 1-4), in that order. That opens the telemetry cache of.

Answer Key

Deep Space Telemetry Decryption · Grade 7 Crack the Code

The key

 lightning bolt = **-5** (hidden)
  circle = **-1** (hidden)
  diamond = **17**
  pentagon = **-4**
 square = **-2**
  moon = **3** (hidden)

Every symbol is a whole number from -9 to 20 (some are negative!).

1.  -  (lightning bolt - square) **-3**
2. ( + ) ×  ((square + moon) x pentagon) **-4**
3. ² -  (pentagon^2 - square) **18**
4. 3 - 2 +  (3 x moon - 2 x pentagon + square) **15**
5.  ×  (lightning bolt x diamond) **-85**
6.  ×  -  (diamond x circle - moon) **-20**
7.  ×  -  (pentagon x lightning bolt - square) **22**
8.  -  -  (diamond - lightning bolt - pentagon) **26**
9. ² +  (circle^2 + square) **-1**
10. 3 - 2 +  (3 x circle - 2 x pentagon + lightning bolt) **0**

Vault code: **4 5 0 6**