The Enchanted Starlight Vault

Calculate the numeric value of each magical symbol to discover the four-digit combination that unlocks the secret starlight chest.

Name: _____ **Date:** _____

1 THE KEY

◆ = 12 ▲ = 11 ♡? = ☐ ○? = ☐ ⚡ = 16

○? = ☐

Every symbol is a whole number from 1 to 20. A number in front of a shape means multiply: 2 stars = 2 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.

5♥ = 45

●² = 169

2○ + ⚡ = 52

3 CRACK THESE

1. ● × ♥ × ▲ = ☐
2. ⚡ ÷ 2 + ♥ = ☐ CODE 1
3. ▲ × ● - ○ = ☐
4. 3○ + 2▲ = ☐ CODE 2
5. ○ × ● - ♥ × ◆ = ☐
6. ◆ ÷ 2 + ♥ = ☐ CODE 3
7. ○ × ● + ⚡ × ◆ = ☐
8. 3◆ + 2♥ = ☐ CODE 4
9. 10◆ - ● = ☐
10. ▲ × ● × ⚡ = ☐

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 secret starlight chest.

TEACHER / PARENT

Answer Key

The Enchanted Starlight Vault · Grade 5 Crack the Code

The key

◆ diamond = **12** ▲ triangle = **11** ♥ heart = **9** (hidden) ○ ring = **18** (hidden) ϟ lightning bolt = **16**

● circle = **13** (hidden)

Every symbol is a whole number from 1 to 20.

1.	● × ♥ × ▲ (circle x heart x triangle)	**1287**
2.	ϟ ÷ **2** + ♥ (lightning bolt / 2 + heart)	**17**
3.	▲ × ● - ○ (triangle x circle - ring)	**125**
4.	**3**○ + **2**▲ (3 x ring + 2 x triangle)	**76**
5.	○ × ● - ♥ × ◆ (ring x circle - heart x diamond)	**126**
6.	◆ ÷ **2** + ♥ (diamond / 2 + heart)	**15**
7.	○ × ● + ϟ × ◆ (ring x circle + lightning bolt x diamond)	**426**
8.	**3**◆ + **2**♥ (3 x diamond + 2 x heart)	**54**
9.	**10**◆ - ● (10 x diamond - circle)	**107**
10.	▲ × ● × ϟ (triangle x circle x lightning bolt)	**2288**

Vault code: **7 6 5 4**