Crack the Vault Code

Someone locked the vault with a 4-digit code. Work out what each shape is worth and crack it.

Name: _____ **Date:** _____

1 THE KEY

? = ☐ ⚡ = ☐ ◆ = 15 ○ = 6 ⬟ = 5 ☆? = ☐

Every symbol is a whole number from 1 to 15. 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.

⚡ × ◆ = 165

⚡ - ★ = 4

◆ - ■ = 6

3 CRACK THESE

1. 100■ + ★ = ☐
2. 10★ - ◆ = ☐ CODE 1
3. 100◆ + ⬟ = ☐
4. 3■ + 2★ = ☐ CODE 2
5. ⚡ × ■ = ☐
6. (⚡ + ⬟) × ○ = ☐ CODE 3
7. 3○ + 2⬟ = ☐
8. (■ + ⚡) × ◆ = ☐ 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 vault.

TEACHER / PARENT

Answer Key

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The key

■ square = **9** (hidden) ⚡ lightning bolt = **11** (hidden) ◆ diamond = **15** ○ ring = **6** ⬟ pentagon = **5** ★ star = **7** (hidden)

Every symbol is a whole number from 1 to 15.

1. **100** ■ + ★ (100 x square + star) **907**
2. **10** ★ - ◆ (10 x star - diamond) **55**
3. **100** ◆ + ⬟ (100 x diamond + pentagon) **1505**
4. **3** ■ + **2** ★ (3 x square + 2 x star) **41**
5. ⚡ × ■ (lightning bolt x square) **99**
6. (⚡ + ⬟) × ○ ((lightning bolt + pentagon) x ring) **96**
7. **3** ○ + **2** ⬟ (3 x ring + 2 x pentagon) **28**
8. (■ + ⚡) × ◆ ((square + lightning bolt) x diamond) **300**
9. **10** ★ - ⚡ (10 x star - lightning bolt) **59**
10. (⚡ - ■) × ◆ ((lightning bolt - square) x diamond) **30**

Vault code: **5 1 6 0**