



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

$$\begin{array}{cccccc} \text{⚡} = \square & \heartsuit = 15 & \triangle = \square & \text{☾} = 5 & \diamond = \square & \blacksquare = 9 \end{array}$$

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.

$$4 \blacklozenge = 24$$

$$\blacktriangle \times \text{☾} = 60$$

$$2 \text{⚡} + \heartsuit = 43$$

3 CRACK THESE

$$1. \ 10 \text{☾} - \blacktriangle = \square$$

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

CODE 1

$$3. \ \blacklozenge + \heartsuit \times \text{⚡} = \square$$

$$4. \ 3 \blacksquare + 2 \blacktriangle = \square$$

CODE 2

$$5. \ \text{☾} \times \blacktriangle - \text{⚡} = \square$$

$$6. \ (\text{☾} + \blacksquare) \div \text{⚡} = \square$$

CODE 3

$$7. \ 10 \heartsuit - \blacklozenge = \square$$

$$8. \ (\text{☾} + \blacklozenge) \times \heartsuit = \square$$

CODE 4

$$9. \ \text{☾} \times \text{⚡} \times \blacktriangle = \square$$

$$10. \ \heartsuit \times \text{☾} \times \text{⚡} = \square$$

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 vault.

Answer Key

Crack the Vault Code · Grade 5 Crack the Code

The key

⚡ lightning bolt = **14** (hidden) ♥ heart = **15** ▲ triangle = **12** (hidden) ☾ moon = **5**
 ◆ diamond = **6** (hidden) ■ square = **9**

Every symbol is a whole number from 1 to 20.

- | | | |
|-----|--|-------------|
| 1. | $10☾ - ▲$ (10 x moon - triangle) | 38 |
| 2. | $3☾ + 2◆$ (3 x moon + 2 x diamond) | 27 |
| 3. | $◆ + ♥ \times ⚡$ (diamond + heart x lightning bolt) | 216 |
| 4. | $3■ + 2▲$ (3 x square + 2 x triangle) | 51 |
| 5. | $☾ \times ▲ - ⚡$ (moon x triangle - lightning bolt) | 46 |
| 6. | $(☾ + ■) \div ⚡$ ((moon + square) / lightning bolt) | 1 |
| 7. | $10♥ - ◆$ (10 x heart - diamond) | 144 |
| 8. | $(☾ + ◆) \times ♥$ ((moon + diamond) x heart) | 165 |
| 9. | $☾ \times ⚡ \times ▲$ (moon x lightning bolt x triangle) | 840 |
| 10. | $♥ \times ☾ \times ⚡$ (heart x moon x lightning bolt) | 1050 |

Vault code: **7 1 1 5**