

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

$$\text{⚡} = 12 \quad \text{☾} = \boxed{} \quad \text{?} = \boxed{} \quad \text{◆} = 4 \quad \text{♥} = 5 \quad \text{★} = 7$$

Every symbol is a whole number from 1 to 12. 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.

$$4 \text{●} = 40$$

$$\text{●} - \text{☾} = 4$$

3 CRACK THESE

$$1. \quad 3 \text{☾} - \text{◆} = \boxed{}$$

$$2. \quad \text{★} \times \text{●} + \text{♥} = \boxed{} \quad \text{CODE 1}$$

$$3. \quad \text{●} \times \text{★} = \boxed{}$$

$$4. \quad \text{●} \times \text{⚡} - \text{◆} = \boxed{} \quad \text{CODE 2}$$

$$5. \quad 2 \text{★} + \text{⚡} = \boxed{}$$

$$6. \quad \text{◆} \times \text{●} + \text{★} = \boxed{} \quad \text{CODE 3}$$

$$7. \quad \text{●} \times \text{⚡} = \boxed{}$$

$$8. \quad 2 \text{●} + \text{☾} = \boxed{} \quad \text{CODE 4}$$

$$9. \quad \text{●} \times \text{☾} - \text{♥} = \boxed{}$$

$$10. \quad \text{●} + \text{☾} + \text{♥} = \boxed{}$$

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 3 Crack the Code

The key

⚡ lightning bolt = **12** 🌙 moon = **6** (hidden) ● circle = **10** (hidden) ♦ diamond = **4** ♥ heart = **5**
 ★ star = **7**

Every symbol is a whole number from 1 to 12.

- | | | |
|-----|---|------------|
| 1. | $3\text{🌙} - \text{♦}$ (3 x moon - diamond) | 14 |
| 2. | $\text{★} \times \text{●} + \text{♥}$ (star x circle + heart) | 75 |
| 3. | $\text{●} \times \text{★}$ (circle x star) | 70 |
| 4. | $\text{●} \times \text{⚡} - \text{♦}$ (circle x lightning bolt - diamond) | 116 |
| 5. | $2\text{★} + \text{⚡}$ (2 x star + lightning bolt) | 26 |
| 6. | $\text{♦} \times \text{●} + \text{★}$ (diamond x circle + star) | 47 |
| 7. | $\text{●} \times \text{⚡}$ (circle x lightning bolt) | 120 |
| 8. | $2\text{●} + \text{🌙}$ (2 x circle + moon) | 26 |
| 9. | $\text{●} \times \text{🌙} - \text{♥}$ (circle x moon - heart) | 55 |
| 10. | $\text{●} + \text{🌙} + \text{♥}$ (circle + moon + heart) | 21 |

Vault code: **5 6 7 6**