

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

$$\text{pentagon} = 2 \quad \text{square} = 6 \quad \text{circle with ?} = \boxed{} \quad \text{circle} = 5 \quad \text{crescent moon} = 12 \quad \text{plus sign} = \boxed{}$$

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.

$$+ + + = 14$$

$$\bullet + \bullet = 8$$

3 CRACK THESE

$$1. \quad 2 \text{ pentagon} + \text{circle} = \boxed{}$$

$$2. \quad 10 \bullet + + = \boxed{} \quad \text{CODE 1}$$

$$3. \quad 5 \text{ pentagon} - \bullet = \boxed{}$$

$$4. \quad 3 \text{ circle} - \text{pentagon} = \boxed{} \quad \text{CODE 2}$$

$$5. \quad 3 \text{ square} - + = \boxed{}$$

$$6. \quad 2 \text{ crescent moon} + + = \boxed{} \quad \text{CODE 3}$$

$$7. \quad 10 + + \text{pentagon} = \boxed{}$$

$$8. \quad 5 + - \text{crescent moon} = \boxed{} \quad \text{CODE 4}$$

$$9. \quad \text{square} \times \bullet + \text{circle} = \boxed{}$$

$$10. \quad + \times \bullet + \text{circle} = \boxed{}$$

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

 pentagon = **2**
  square = **6**
  circle = **4** (hidden)
  ring = **5**
  moon = **12**
 cross = **7** (hidden)

Every symbol is a whole number from 1 to 12.

- | | | |
|-----|---|-----------|
| 1. | $2 \text{ pentagon} + 1 \text{ ring}$ | 9 |
| 2. | $10 \text{ circle} + 7 \text{ cross}$ | 47 |
| 3. | $5 \text{ pentagon} - 1 \text{ circle}$ | 6 |
| 4. | $3 \text{ ring} - 1 \text{ pentagon}$ | 13 |
| 5. | $3 \text{ square} - 7 \text{ cross}$ | 11 |
| 6. | $2 \text{ moon} + 7 \text{ cross}$ | 31 |
| 7. | $10 \text{ cross} + 2 \text{ pentagon}$ | 72 |
| 8. | $5 \text{ cross} - 1 \text{ moon}$ | 23 |
| 9. | $6 \text{ square} \times 1 \text{ circle} + 1 \text{ ring}$ | 29 |
| 10. | $7 \text{ cross} \times 1 \text{ circle} + 1 \text{ ring}$ | 33 |

Vault code: **7 3 1 3**