

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

$$\begin{array}{ccccccc} \text{Hexagon} & = & 4 & \text{Triangle with ?} & = & \boxed{} & \text{Star} & = & 11 & \text{Lightning bolt} & = & \boxed{} & \text{Circle} & = & 5 & \text{Square} & = & 9 \end{array}$$

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.

$$2 \text{ lightning bolts} = 6$$

$$\text{Triangle} + \text{Star} = 23$$

3 CRACK THESE

$$1. \text{ Square} \times \text{Lightning bolt} + \text{Hexagon} = \boxed{}$$

$$2. 2 \text{ lightning bolts} + \text{Hexagon} = \boxed{}$$

CODE 1

$$3. \text{ Triangle} \times \text{Star} = \boxed{}$$

$$4. 10 \text{ Squares} + \text{Triangle} = \boxed{}$$

CODE 2

$$5. 5 \text{ Squares} - \text{Triangle} = \boxed{}$$

$$6. 5 \text{ Stars} - \text{Hexagon} = \boxed{}$$

CODE 3

$$7. \text{ Lightning bolt} \times \text{Circle} = \boxed{}$$

$$8. 3 \text{ Squares} - \text{Hexagon} = \boxed{}$$

CODE 4

$$9. 10 \text{ Squares} + \text{Hexagon} = \boxed{}$$

$$10. \text{ Circle} \times \text{Square} - \text{Triangle} = \boxed{}$$

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

 hexagon = **4**
  triangle = **12** (hidden)
  star = **11**
  lightning bolt = **3** (hidden)
  circle = **5**
 square = **9**

Every symbol is a whole number from 1 to 12.

- | | | |
|-----|---|------------|
| 1. |  x  +  (square x lightning bolt + hexagon) | 31 |
| 2. | 2  +  (2 x lightning bolt + hexagon) | 10 |
| 3. |  x  (triangle x star) | 132 |
| 4. | 10  +  (10 x square + triangle) | 102 |
| 5. | 5  -  (5 x square - triangle) | 33 |
| 6. | 5  -  (5 x star - hexagon) | 51 |
| 7. |  x  (lightning bolt x circle) | 15 |
| 8. | 3  -  (3 x square - hexagon) | 23 |
| 9. | 10  +  (10 x square + hexagon) | 94 |
| 10. |  x  -  (circle x square - triangle) | 33 |

Vault code: **0 2 1 3**