



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

$$\text{Crescent Moon} = \square \quad \text{Hexagon with ?} = \square \quad \text{Square with ?} = \square \quad \star = 12 \quad \text{Lightning Bolt} = 11 \quad \blacklozenge = 6$$

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.

$$3 \blacklozenge = 21$$

$$\text{Crescent Moon} + \blacklozenge = 21$$

$$4 \blacksquare = 16$$

3 CRACK THESE

$$1. \text{Lightning Bolt} \times \blacklozenge = \square$$

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

CODE 1

$$3. (\star + \text{Crescent Moon}) \times \blacklozenge = \square$$

$$4. 10 \blacklozenge - \text{Lightning Bolt} = \square$$

CODE 2

$$5. 10 \star - \blacksquare = \square$$

$$6. \blacksquare \times \text{Crescent Moon} = \square$$

CODE 3

$$7. \blacklozenge \times \star - \blacksquare = \square$$

$$8. 3 \blacklozenge + 2 \text{Lightning Bolt} = \square$$

CODE 4

$$9. (\text{Lightning Bolt} - \blacklozenge) \times \blacklozenge = \square$$

$$10. 100 \blacksquare + \text{Crescent Moon} = \square$$

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 4 Crack the Code

The key

 moon = **14** (hidden)
  hexagon = **7** (hidden)
  square = **4** (hidden)
  star = **12**
 lightning bolt = **11**
 diamond = **6**

Every symbol is a whole number from 1 to 15.

1.  x  (lightning bolt x hexagon) **77**
2. **3**  + **2**  (3 x hexagon + 2 x moon) **49**
3. ( + ) x  ((star + moon) x hexagon) **182**
4. **10**  -  (10 x diamond - lightning bolt) **49**
5. **10**  -  (10 x star - square) **116**
6.  x  (square x moon) **56**
7.  x  -  (hexagon x star - square) **80**
8. **3**  + **2**  (3 x diamond + 2 x lightning bolt) **40**
9. ( - ) x  ((lightning bolt - hexagon) x diamond) **24**
10. **100**  +  (100 x square + moon) **414**

Vault code: **9960**