

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

$$\blacksquare = 14 \quad \star = \square \quad \triangle = \square \quad \bigcirc = 7 \quad \oplus = \square \quad \text{☾} = 12$$

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.

$$\blacktriangle \times \text{☾} = 120$$

$$\oplus \times \text{☾} = 132$$

$$\star \times \text{☾} = 156$$

3 CRACK THESE

$$1. \star \times \blacksquare - \oplus = \square$$

$$2. (\blacktriangle + \star) \times \text{☾} = \square$$

CODE 1

$$3. \blacksquare \times \star = \square$$

$$4. \oplus \times \star + \blacksquare = \square$$

CODE 2

$$5. 100\oplus + \blacksquare = \square$$

$$6. \blacksquare \times \bigcirc = \square$$

CODE 3

$$7. \oplus \times \bigcirc + \blacktriangle = \square$$

$$8. \blacktriangle \times \star - \blacksquare = \square$$

CODE 4

$$9. 10\blacktriangle - \text{☾} = \square$$

$$10. (\star + \blacktriangle) \times \blacksquare = \square$$

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

 hexagon = **14**
  star = **13** (hidden)
  triangle = **10** (hidden)
  ring = **7**
  cross = **11** (hidden)
 moon = **12**

Every symbol is a whole number from 1 to 15.

1. $\star \times \text{hexagon} - \text{cross}$ (star x hexagon - cross) **171**
2. $(\text{triangle} + \star) \times \text{moon}$ ((triangle + star) x moon) **276**
3. $\text{hexagon} \times \star$ (hexagon x star) **182**
4. $\text{cross} \times \star + \text{hexagon}$ (cross x star + hexagon) **157**
5. $100\text{cross} + \text{hexagon}$ (100 x cross + hexagon) **1114**
6. $\text{hexagon} \times \text{ring}$ (hexagon x ring) **98**
7. $\text{cross} \times \text{ring} + \text{triangle}$ (cross x ring + triangle) **87**
8. $\text{triangle} \times \star - \text{hexagon}$ (triangle x star - hexagon) **116**
9. $10\text{triangle} - \text{moon}$ (10 x triangle - moon) **88**
10. $(\star + \text{triangle}) \times \text{hexagon}$ ((star + triangle) x hexagon) **322**

Vault code: **6786**