



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

$$\triangle = \square \quad + = 6 \quad \heartsuit = 14 \quad \star = 3 \quad \boxed{?} = \square \quad \textcircled{?} = \square$$

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.

$$\blacktriangle \times + = 60$$

$$\blacksquare + \star = 12$$

$$\bullet \times \heartsuit = 56$$

3 CRACK THESE

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

$$2. (\heartsuit - \blacksquare) \times + = \square$$

CODE 1

$$3. \blacktriangle \times \bullet - \blacksquare = \square$$

$$4. (\blacksquare - \bullet) \times \heartsuit = \square$$

CODE 2

$$5. 3\star + 2+ = \square$$

$$6. 10\bullet - \heartsuit = \square$$

CODE 3

$$7. \blacktriangle \times \blacksquare = \square$$

$$8. \blacksquare \times + + \blacktriangle = \square$$

CODE 4

$$9. \blacksquare \times \blacktriangle \div + = \square$$

$$10. + \times \blacksquare - \bullet = \square$$

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

▲ triangle = 10 (hidden) + cross = 6 ♥ heart = 14 ★ star = 3 ■ square = 9 (hidden)
 ● circle = 4 (hidden)

Every symbol is a whole number from 1 to 15.

- | | | |
|-----|---|----|
| 1. | ■ × ★ (square x star) | 27 |
| 2. | (♥ - ■) × + ((heart - square) x cross) | 30 |
| 3. | ▲ × ● - ■ (triangle x circle - square) | 31 |
| 4. | (■ - ●) × ♥ ((square - circle) x heart) | 70 |
| 5. | 3★ + 2+ (3 x star + 2 x cross) | 21 |
| 6. | 10● - ♥ (10 x circle - heart) | 26 |
| 7. | ▲ × ■ (triangle x square) | 90 |
| 8. | ■ × + + ▲ (square x cross + triangle) | 64 |
| 9. | ■ × ▲ ÷ + (square x triangle / cross) | 15 |
| 10. | + × ■ - ● (cross x square - circle) | 50 |

Vault code: **0 0 6 4**