



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

$$\blacksquare = 5 \quad ? = \square \quad \bigcirc = 9 \quad \star = \square \quad ? = \square \quad \blacklozenge = 10$$

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.

$$2 \blacklozenge = 28$$

$$2 \bullet = 14$$

$$\blacklozenge - \star = 10$$

3 CRACK THESE

$$1. 100 \blacksquare + \blacklozenge = \square$$

$$2. (\bullet - \star) \times \blacklozenge = \square$$

CODE 1

$$3. (\blacklozenge - \bullet) \times \blacklozenge = \square$$

$$4. \blacklozenge \times \blacklozenge \div \blacksquare = \square$$

CODE 2

$$5. \blacklozenge \times \star = \square$$

$$6. 10 \blacklozenge - \blacksquare = \square$$

CODE 3

$$7. 100 \bullet + \star = \square$$

$$8. \blacklozenge \times \bullet = \square$$

CODE 4

$$9. 3 \blacklozenge + 2 \bullet = \square$$

$$10. 3 \bigcirc + 2 \blacklozenge = \square$$

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

 square = **5**
  circle = **7** (hidden)
  ring = **9**
  star = **4** (hidden)
  hexagon = **14** (hidden)
 pentagon = **10**

Every symbol is a whole number from 1 to 15.

1. $100 \blacksquare + \blacklozenge$ (100 x square + pentagon) **510**
2. $(\bullet - \star) \times \blacklozenge$ ((circle - star) x pentagon) **30**
3. $(\blacklozenge - \bullet) \times \blackhexagon$ ((pentagon - circle) x hexagon) **42**
4. $\blacklozenge \times \blackhexagon \div \blacksquare$ (pentagon x hexagon / square) **28**
5. $\blackhexagon \times \star$ (hexagon x star) **56**
6. $10 \blackhexagon - \blacksquare$ (10 x hexagon - square) **135**
7. $100 \bullet + \star$ (100 x circle + star) **704**
8. $\blackhexagon \times \bullet$ (hexagon x circle) **98**
9. $3 \blackhexagon + 2 \bullet$ (3 x hexagon + 2 x circle) **56**
10. $3 \bigcirc + 2 \blacklozenge$ (3 x ring + 2 x pentagon) **47**

Vault code: **0858**