

The Whispering Library Cipher

Crack the numerical values of the ancient symbols to open the locked compartment holding the legendary golden book.

Name: _____ Date: _____

1 THE KEY

$$\text{?} = \square \quad \blacktriangle = 11 \quad + = 5 \quad \triangle = \square \quad \diamond = \square \quad \blacksquare = 4$$

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.

$$\blacktriangle \times \blacktriangle = 66$$

$$\blacktriangle - \blacktriangle = 4$$

$$\bigcirc + \blacksquare = 17$$

3 CRACK THESE

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

$$2. 3\blacktriangle + 2\bigcirc = \square$$

CODE 1

$$3. \blacktriangle \times \blacktriangle = \square$$

$$4. + \times \blacktriangle - \blacktriangle = \square$$

CODE 2

$$5. 10\bigcirc - \blacktriangle = \square$$

$$6. (\bigcirc + +) \times \blacksquare = \square$$

CODE 3

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

$$8. (\blacktriangle + \blacktriangle) \times \bigcirc = \square$$

CODE 4

$$9. 100+ + \blacktriangle = \square$$

$$10. 3\blacksquare + 2\blacktriangle = \square$$

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 brass-bound library chest.

Answer Key

The Whispering Library Cipher · Grade 4 Crack the Code

The key

 ring = **13** (hidden)
  pentagon = **11**
  cross = **5**
  triangle = **6** (hidden)
  diamond = **7** (hidden)

 hexagon = **4**

Every symbol is a whole number from 1 to 15.

1.  x  (hexagon x ring) **52**
2. **3** + **2** (3 x pentagon + 2 x ring) **59**
3.  x  (triangle x diamond) **42**
4.  x  -  (cross x pentagon - diamond) **48**
5. **10** -  (10 x ring - pentagon) **119**
6. ( + ) x  ((ring + cross) x hexagon) **72**
7.  x  -  (ring x cross - triangle) **59**
8. ( + ) x  ((pentagon + diamond) x ring) **234**
9. **100** +  (100 x cross + triangle) **506**
10. **3** + **2** (3 x hexagon + 2 x pentagon) **34**

Vault code: **9 8 2 4**