



Fossil Lab Cipher

Solve the mathematical equations using the dinosaur footprint, tooth, and fossilized leaf symbols to find the combination for the heavy security crate.

Name: _____ Date: _____

1 THE KEY

$$\bigcirc = 8 \quad \blacksquare = 6 \quad \triangle = \boxed{} \quad \text{☾} = \boxed{} \quad \text{⬡} = \boxed{} \quad \bullet = 12$$

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.

$$\blacksquare - \text{⬡} = -5$$

$$\text{☾} + \text{☾} + \text{☾} = 30$$

$$\blacktriangle + \blacktriangle + \blacktriangle = 12$$

3 CRACK THESE

$$1. \bullet \times \blacktriangle \div \blacksquare = \boxed{}$$

$$2. \blacksquare \times \bigcirc + \text{☾} = \boxed{}$$

CODE 1

$$3. 100 \text{ ☾} + \text{⬡} = \boxed{}$$

$$4. (\text{⬡} - \bigcirc) \times \bullet = \boxed{}$$

CODE 2

$$5. 10 \blacktriangle - \blacksquare = \boxed{}$$

$$6. 3 \bigcirc + 2 \blacktriangle = \boxed{}$$

CODE 3

$$7. \bigcirc \times \text{⬡} = \boxed{}$$

$$8. 3 \blacksquare + 2 \text{ ☾} = \boxed{}$$

CODE 4

$$9. 100 \blacktriangle + \blacksquare = \boxed{}$$

$$10. \bigcirc \times \text{⬡} - \bullet = \boxed{}$$

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 heavy steel security.

Answer Key

Fossil Lab Cipher · Grade 4 Crack the Code

The key

 ring = **8**
  square = **6**
  triangle = **4** (hidden)
  moon = **10** (hidden)
  hexagon = **11** (hidden)

 circle = **12**

Every symbol is a whole number from 1 to 15.

- | | | |
|-----|---|-------------|
| 1. |  ×  ÷  (circle x triangle / square) | 8 |
| 2. |  ×  +  (square x ring + moon) | 58 |
| 3. | 100  +  (100 x moon + hexagon) | 1011 |
| 4. | ( - ) ×  ((hexagon - ring) x circle) | 36 |
| 5. | 10  -  (10 x triangle - square) | 34 |
| 6. | 3  + 2  (3 x ring + 2 x triangle) | 32 |
| 7. |  ×  (ring x hexagon) | 88 |
| 8. | 3  + 2  (3 x square + 2 x moon) | 38 |
| 9. | 100  +  (100 x triangle + square) | 406 |
| 10. |  ×  -  (ring x hexagon - circle) | 76 |

Vault code: 8 6 2 8