

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

$$\text{☾} = 18 \quad \text{⚠} = \boxed{} \quad \blacksquare = 5 \quad \text{⚡} = \boxed{} \quad \bullet = 9 \quad \text{Ⓢ} = \boxed{}$$

Every symbol is a whole number from 1 to 20. 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.

$$\text{○}^2 = 64$$

$$\blacktriangle - \bullet = 2$$

$$2\text{⚡} + \text{○} = 20$$

3 CRACK THESE

$$1. (\text{○} + \text{⚡}) \times \bullet = \boxed{}$$

$$2. \blacksquare \times \text{☾} \div \bullet = \boxed{}$$

CODE 1

$$3. \bullet \times \text{○} + \text{☾} \times \blacktriangle = \boxed{}$$

$$4. \text{○} + \text{☾} \times \blacktriangle = \boxed{}$$

CODE 2

$$5. \text{○} \times \text{⚡} - \bullet = \boxed{}$$

$$6. \text{☾} \div 2 + \blacktriangle = \boxed{}$$

CODE 3

$$7. \text{○} \times \text{☾} \times \bullet = \boxed{}$$

$$8. \text{○} \times \text{⚡} \times \blacksquare = \boxed{}$$

CODE 4

$$9. 10\text{○} - \text{☾} = \boxed{}$$

$$10. \text{⚡} \times (\text{☾} - \bullet) = \boxed{}$$

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 vault.

Answer Key

Crack the Vault Code · Grade 5 Crack the Code

The key

 moon = **18**
  triangle = **11** (hidden)
  square = **5**
  lightning bolt = **6** (hidden)
  circle = **9**
 ring = **8** (hidden)

Every symbol is a whole number from 1 to 20.

- | | | |
|-----|--|-------------|
| 1. | $(\bigcirc + \text{lightning bolt}) \times \bullet$ ((ring + lightning bolt) x circle) | 126 |
| 2. | $\blacksquare \times \text{moon} \div \bullet$ (square x moon / circle) | 10 |
| 3. | $\bullet \times \bigcirc + \text{moon} \times \text{triangle}$ (circle x ring + moon x triangle) | 270 |
| 4. | $\bigcirc + \text{moon} \times \text{triangle}$ (ring + moon x triangle) | 206 |
| 5. | $\bigcirc \times \text{lightning bolt} - \bullet$ (ring x lightning bolt - circle) | 39 |
| 6. | $\text{moon} \div 2 + \text{triangle}$ (moon / 2 + triangle) | 20 |
| 7. | $\bigcirc \times \text{moon} \times \bullet$ (ring x moon x circle) | 1296 |
| 8. | $\bigcirc \times \text{lightning bolt} \times \blacksquare$ (ring x lightning bolt x square) | 240 |
| 9. | $10\bigcirc - \text{moon}$ (10 x ring - moon) | 62 |
| 10. | $\text{lightning bolt} \times (\text{moon} - \bullet)$ (lightning bolt x (moon - circle)) | 54 |

Vault code: **0600**