

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

$$\boxed{?} = \boxed{} \quad \text{pentagon} = 5 \quad \text{circle with ?} = \boxed{} \quad \text{lightning bolt} = 4 \quad \text{crescent moon} = \boxed{} \quad \text{plus sign} = 9$$

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.

$$4 \text{ crescent moon} = 60$$

$$\text{circle} \times \text{pentagon} = 60$$

$$2 \text{ square} = 26$$

3 CRACK THESE

$$1. (\text{square} + \text{circle}) \times \text{lightning bolt} = \boxed{}$$

$$2. (\text{plus sign} + \text{circle}) \times \text{pentagon} = \boxed{}$$

CODE 1

$$3. \text{crescent moon} \times \text{circle} + \text{plus sign} = \boxed{}$$

$$4. \text{plus sign} \times \text{square} = \boxed{}$$

CODE 2

$$5. 10 \text{ lightning bolt} - \text{crescent moon} = \boxed{}$$

$$6. 100 \text{ plus sign} + \text{pentagon} = \boxed{}$$

CODE 3

$$7. 3 \text{ circle} + 2 \text{ lightning bolt} = \boxed{}$$

$$8. \text{lightning bolt} \times \text{crescent moon} - \text{circle} = \boxed{}$$

CODE 4

$$9. \text{pentagon} \times \text{lightning bolt} = \boxed{}$$

$$10. 100 \text{ pentagon} + \text{circle} = \boxed{}$$

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 4 Crack the Code

The key

 square = **13** (hidden)
  pentagon = **5**
  circle = **12** (hidden)
  lightning bolt = **4**
 moon = **15** (hidden)
  cross = **9**

Every symbol is a whole number from 1 to 15.

- | | | |
|-----|---|------------|
| 1. | $(\blacksquare + \bullet) \times \text{⚡}$ ((square + circle) x lightning bolt) | 100 |
| 2. | $(\text{⛶} + \bullet) \times \text{⬠}$ ((cross + circle) x pentagon) | 105 |
| 3. | $\text{☾} \times \bullet + \text{⛶}$ (moon x circle + cross) | 189 |
| 4. | $\text{⛶} \times \blacksquare$ (cross x square) | 117 |
| 5. | $10 \text{⚡} - \text{☾}$ (10 x lightning bolt - moon) | 25 |
| 6. | $100 \text{⛶} + \text{⬠}$ (100 x cross + pentagon) | 905 |
| 7. | $3 \bullet + 2 \text{⚡}$ (3 x circle + 2 x lightning bolt) | 44 |
| 8. | $\text{⚡} \times \text{☾} - \bullet$ (lightning bolt x moon - circle) | 48 |
| 9. | $\text{⬠} \times \text{⚡}$ (pentagon x lightning bolt) | 20 |
| 10. | $100 \text{⬠} + \bullet$ (100 x pentagon + circle) | 512 |

Vault code: **5758**