



Redstone Vault Code Breaker

Solve the block equations to determine each item value and reveal the secret combination that unlocks the hidden chest.

Name: _____ Date: _____

1 THE KEY

$$\heartsuit = \square \quad \text{⚡} = 11 \quad \bullet = 16 \quad \text{☾} = \square \quad \text{⬠} = \square \quad \blacktriangle = 5$$

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.

$$\text{☾} - \bullet = 3$$

$$4 \heartsuit = 40$$

$$3 \text{⬠} = 24$$

3 CRACK THESE

$$1. \text{☾} \times \heartsuit - \text{⬠} \times \bullet = \square$$

$$2. 10 \heartsuit - \text{☾} = \square$$

CODE 1

$$3. \text{⬠} \times \blacktriangle - \text{☾} = \square$$

$$4. (\text{⚡} + \bullet) \times \blacktriangle = \square$$

CODE 2

$$5. (\text{⚡} + \text{⬠}) \times \bullet = \square$$

$$6. 3 \text{⬠} + 2 \text{⚡} = \square$$

CODE 3

$$7. \heartsuit \times \blacktriangle - \text{⚡} = \square$$

$$8. \heartsuit \times \text{⬠} - \text{⚡} \times \blacktriangle = \square$$

CODE 4

$$9. 10 \heartsuit - \bullet = \square$$

$$10. \blacktriangle \times \text{⚡} + \text{☾} \times \bullet = \square$$

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 obsidian supply chest.

Answer Key

Redstone Vault Code Breaker · Grade 5 Crack the Code

The key

 heart = **10** (hidden)
  lightning bolt = **11**
  circle = **16**
  moon = **19** (hidden)
 hexagon = **8** (hidden)
 triangle = **5**

Every symbol is a whole number from 1 to 20.

- | | | |
|-----|---|------------|
| 1. | $\text{moon} \times \text{heart} - \text{hexagon} \times \text{circle}$ (moon x heart - hexagon x circle) | 62 |
| 2. | $10 \times \text{heart} - \text{moon}$ (10 x heart - moon) | 81 |
| 3. | $\text{hexagon} \times \text{triangle} - \text{moon}$ (hexagon x triangle - moon) | 21 |
| 4. | $(\text{lightning bolt} + \text{circle}) \times \text{triangle}$ ((lightning bolt + circle) x triangle) | 135 |
| 5. | $(\text{lightning bolt} + \text{hexagon}) \times \text{circle}$ ((lightning bolt + hexagon) x circle) | 304 |
| 6. | $3 \times \text{hexagon} + 2 \times \text{lightning bolt}$ (3 x hexagon + 2 x lightning bolt) | 46 |
| 7. | $\text{heart} \times \text{triangle} - \text{lightning bolt}$ (heart x triangle - lightning bolt) | 39 |
| 8. | $\text{heart} \times \text{hexagon} - \text{lightning bolt} \times \text{triangle}$ (heart x hexagon - lightning bolt x triangle) | 25 |
| 9. | $10 \times \text{heart} - \text{circle}$ (10 x heart - circle) | 84 |
| 10. | $\text{triangle} \times \text{lightning bolt} + \text{moon} \times \text{circle}$ (triangle x lightning bolt + moon x circle) | 359 |

Vault code: **1 5 6 5**