



Mermaid Reef Secret Code

Use your math skills to figure out the shape values and unlock the pearl chest resting on the ocean floor.

Name: _____ Date: _____

1 THE KEY

$$\blacksquare = 7 \quad \heartsuit = \square \quad \smile = 3 \quad \lightningbolt = \square \quad + = 6 \quad \bullet = 2$$

Every symbol is a whole number from 1 to 12. 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.

$$\heartsuit + \heartsuit + \heartsuit = 30$$

$$\lightningbolt + + = 10$$

3 CRACK THESE

$$1. \ 2\bullet + + = \square$$

$$2. \ \lightningbolt \times \blacksquare = \square$$

CODE 1

$$3. \ + \times \lightningbolt = \square$$

$$4. \ \blacksquare \times + + \heartsuit = \square$$

CODE 2

$$5. \ 2+ + \lightningbolt = \square$$

$$6. \ \lightningbolt + + \smile = \square$$

CODE 3

$$7. \ \bullet \times + + \lightningbolt = \square$$

$$8. \ \lightningbolt \times \smile - \blacksquare = \square$$

CODE 4

$$9. \ 10\blacksquare + \bullet = \square$$

$$10. \ 3\lightningbolt - \blacksquare = \square$$

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 pearl chest.

Answer Key

Mermaid Reef Secret Code · Grade 3 Crack the Code

The key

■ square = 7 ♥ heart = 10 (hidden) ☾ moon = 3 ⚡ lightning bolt = 4 (hidden) ✚ cross = 6
 ● circle = 2

Every symbol is a whole number from 1 to 12.

- | | | |
|-----|--|----|
| 1. | $2● + ✚$ (2 x circle + cross) | 10 |
| 2. | $⚡ \times ■$ (lightning bolt x square) | 28 |
| 3. | $✚ \times ⚡$ (cross x lightning bolt) | 24 |
| 4. | $■ \times ✚ + ♥$ (square x cross + heart) | 52 |
| 5. | $2✚ + ⚡$ (2 x cross + lightning bolt) | 16 |
| 6. | $⚡ + ✚ + ☾$ (lightning bolt + cross + moon) | 13 |
| 7. | $● \times ✚ + ⚡$ (circle x cross + lightning bolt) | 16 |
| 8. | $⚡ \times ☾ - ■$ (lightning bolt x moon - square) | 5 |
| 9. | $10■ + ●$ (10 x square + circle) | 72 |
| 10. | $3⚡ - ■$ (3 x lightning bolt - square) | 5 |

Vault code: 8 2 3 5