

The Redstone Captain's Obsidian Chest

Decode the values of the pirate-themed blocks and items to find the four-digit combination for the captain's vault.

Name: _____ Date: _____

1 THE KEY

$$\text{Pentagon} = 9 \quad \text{Crescent} = \boxed{} \quad \text{Hexagon} = \boxed{} \quad \text{Question Mark} = \boxed{} \quad \text{Lightning Bolt} = 8 \quad \text{Diamond} = 13$$

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.

$$\text{Circle} + \text{Lightning Bolt} = 18$$

$$2 \text{ Crescent} = 14$$

$$\text{Hexagon} + \text{Hexagon} + \text{Hexagon} = 33$$

3 CRACK THESE

$$1. (\text{Circle} + \text{Diamond}) \times \text{Hexagon} = \boxed{}$$

$$2. \text{Diamond} \times \text{Pentagon} = \boxed{}$$

CODE 1

$$3. (\text{Diamond} - \text{Hexagon}) \times \text{Lightning Bolt} = \boxed{}$$

$$4. 10 \text{ Hexagon} - \text{Diamond} = \boxed{}$$

CODE 2

$$5. \text{Circle} \times \text{Hexagon} = \boxed{}$$

$$6. \text{Pentagon} \times \text{Circle} - \text{Lightning Bolt} = \boxed{}$$

CODE 3

$$7. (\text{Lightning Bolt} + \text{Circle}) \times \text{Diamond} = \boxed{}$$

$$8. \text{Diamond} \times \text{Circle} - \text{Lightning Bolt} = \boxed{}$$

CODE 4

$$9. 3 \text{ Hexagon} + 2 \text{ Diamond} = \boxed{}$$

$$10. 100 \text{ Pentagon} + \text{Crescent} = \boxed{}$$

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 obsidian chest locked.

Answer Key

The Redstone Captain's Obsidian Chest · Grade 4 Crack the Code

The key

 pentagon = **9**
  moon = **7** (hidden)
  hexagon = **11** (hidden)
  ring = **10** (hidden)
 lightning bolt = **8**
 diamond = **13**

Every symbol is a whole number from 1 to 15.

1. $(\bigcirc + \blacklozenge) \times \blackhexagon$ ((ring + diamond) x hexagon) **253**
2. $\blacklozenge \times \blackpentagon$ (diamond x pentagon) **117**
3. $(\blacklozenge - \blackhexagon) \times \text{lightning bolt}$ ((diamond - hexagon) x lightning bolt) **16**
4. $10 \blackhexagon - \blacklozenge$ (10 x hexagon - diamond) **97**
5. $\bigcirc \times \blackhexagon$ (ring x hexagon) **110**
6. $\blackpentagon \times \bigcirc - \text{lightning bolt}$ (pentagon x ring - lightning bolt) **82**
7. $(\text{lightning bolt} + \bigcirc) \times \blacklozenge$ ((lightning bolt + ring) x diamond) **234**
8. $\blacklozenge \times \bigcirc - \text{lightning bolt}$ (diamond x ring - lightning bolt) **122**
9. $3 \blackhexagon + 2 \blacklozenge$ (3 x hexagon + 2 x diamond) **59**
10. $100 \blackpentagon + \text{moon}$ (100 x pentagon + moon) **907**

Vault code: **7722**