Redstone Cipher Minecraft Vault Challenge

Calculate the value of each Minecraft item to reveal the four-digit combination that unlocks the obsidian treasure chest.

Name: _____ **Date:** _____

1 THE KEY

◆ = 15 ? = ☐ ⬢ = 11 ☾ = 12 ♡? = ☐

✚? = ☐

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.

○ × ◆ = 105

♥ + ○ = 21

✚ + ✚ + ✚ = 24

3 CRACK THESE

1. (☾ + ○) × ⬢ = ☐

2. 3♥ + 2◆ = ☐ CODE 1

3. (◆ - ♥) × ○ = ☐

4. ◆ × ✚ - ○ = ☐ CODE 2

5. ✚ × ☾ = ☐

6. ☾ × ○ - ♥ = ☐ CODE 3

7. 10○ - ◆ = ☐

8. ○ × ☾ + ✚ = ☐ CODE 4

9. ○ × ♥ + ✚ = ☐

10. 100✚ + ♥ = ☐

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 treasure chest.

TEACHER / PARENT

Answer Key

Redstone Cipher Minecraft Vault Challenge · Grade 4 Crack the Code

The key

◆ diamond = **15** ○ ring = **7** (hidden) ⬢ hexagon = **11** ☾ moon = **12** ♥ heart = **14** (hidden)

✚ cross = **8** (hidden)

Every symbol is a whole number from 1 to 15.

1. **(☾ + ○) × ⬢** ((moon + ring) x hexagon) — **209**
2. **3♥ + 2◆** (3 x heart + 2 x diamond) — **72**
3. **(◆ - ♥) × ○** ((diamond - heart) x ring) — **7**
4. **◆ × ✚ - ○** (diamond x cross - ring) — **113**
5. **✚ × ☾** (cross x moon) — **96**
6. **☾ × ○ - ♥** (moon x ring - heart) — **70**
7. **10○ - ◆** (10 x ring - diamond) — **55**
8. **○ × ☾ + ✚** (ring x moon + cross) — **92**
9. **○ × ♥ + ✚** (ring x heart + cross) — **106**
10. **100✚ + ♥** (100 x cross + heart) — **814**

Vault code: 2 3 0 2