

Mission Control Codebreaker

Solve the cosmic shape equations using your math skills to find the missing four-digit code.

Name: _____ Date: _____

1 THE KEY

$$\begin{array}{lclclclcl}
 \text{+} & = & \boxed{} & \heartsuit & = & 10 & \blacksquare & = & 14 & \bigcirc & = & 11 & \text{☾} & = & \boxed{} \\
 \text{◇} & = & \boxed{}
 \end{array}$$

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.

$$\text{+} + \heartsuit = 16$$

$$\heartsuit - \text{◇} = 1$$

$$\text{☾} + \text{☾} + \text{☾} = 15$$

3 CRACK THESE

$$1. \quad 3\text{+} + 2\blacksquare = \boxed{}$$

$$2. \quad (\heartsuit - \text{◇}) \times \bigcirc = \boxed{}$$

CODE 1

$$3. \quad \heartsuit \times \text{◇} = \boxed{}$$

$$4. \quad \text{☾} \times \bigcirc = \boxed{}$$

CODE 2

$$5. \quad 100\heartsuit + \text{☾} = \boxed{}$$

$$6. \quad \text{+} \times \blacksquare + \bigcirc = \boxed{}$$

CODE 3

$$7. \quad 10\text{◇} - \bigcirc = \boxed{}$$

$$8. \quad (\bigcirc - \text{+}) \times \heartsuit = \boxed{}$$

CODE 4

$$9. \quad 10\blacksquare - \text{☾} = \boxed{}$$

$$10. \quad 3\text{☾} + 2\text{◇} = \boxed{}$$

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 navigation computer of.

Answer Key

Mission Control Codebreaker · Grade 4 Crack the Code

The key

+ cross = 6 (hidden) ♥ heart = 10 ■ square = 14 ○ ring = 11 ☾ moon = 5 (hidden)
 ◆ diamond = 9 (hidden)

Every symbol is a whole number from 1 to 15.

- | | | |
|-----|---|------|
| 1. | $3+ + 2■$ (3 x cross + 2 x square) | 46 |
| 2. | $(♥ - ◆) \times ○$ ((heart - diamond) x ring) | 11 |
| 3. | $♥ \times ◆$ (heart x diamond) | 90 |
| 4. | $☾ \times ○$ (moon x ring) | 55 |
| 5. | $100♥ + ☾$ (100 x heart + moon) | 1005 |
| 6. | $+ \times ■ + ○$ (cross x square + ring) | 95 |
| 7. | $10◆ - ○$ (10 x diamond - ring) | 79 |
| 8. | $(○ - +) \times ♥$ ((ring - cross) x heart) | 50 |
| 9. | $10■ - ☾$ (10 x square - moon) | 135 |
| 10. | $3☾ + 2◆$ (3 x moon + 2 x diamond) | 33 |

Vault code: **1 5 5 0**