



Mars Rover Decoder

Solve the planetary symbol equations to discover the four-digit override code and boot up the stranded Mars rover.

Name: _____ Date: _____

1 THE KEY

$$\heartsuit = 3 \quad \text{☾} = 6 \quad \triangle = \square \quad \text{?} = \square \quad \star = 14 \quad \text{?} = \square$$

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.

$$\bullet \times \heartsuit = 27$$

$$\blacktriangle \times \text{☾} = 66$$

$$\bigcirc \times \text{☾} = 24$$

3 CRACK THESE

$$1. \bullet \times \star = \square$$

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

CODE 1

$$3. (\star + \bigcirc) \times \blacktriangle = \square$$

$$4. 3 \bigcirc + 2 \bullet = \square$$

CODE 2

$$5. \blacktriangle \times \star = \square$$

$$6. 10 \star - \bullet = \square$$

CODE 3

$$7. \text{☾} \times \bigcirc - \blacktriangle = \square$$

$$8. \blacktriangle \times \bigcirc + \heartsuit = \square$$

CODE 4

$$9. \star \times \heartsuit - \blacktriangle = \square$$

$$10. \heartsuit \times \bigcirc + \bullet = \square$$

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 control panel of.

Answer Key

Mars Rover Decoder · Grade 4 Crack the Code

The key

 heart = **3**
  moon = **6**
  triangle = **11** (hidden)
  ring = **4** (hidden)
  star = **14**
 circle = **9** (hidden)

Every symbol is a whole number from 1 to 15.

- | | | |
|-----|--|------------|
| 1. |  ×  (circle x star) | 126 |
| 2. | 10  -  (10 x ring - moon) | 34 |
| 3. | ( + ) ×  ((star + ring) x triangle) | 198 |
| 4. | 3  + 2  (3 x ring + 2 x circle) | 30 |
| 5. |  ×  (triangle x star) | 154 |
| 6. | 10  -  (10 x star - circle) | 131 |
| 7. |  ×  -  (moon x ring - triangle) | 13 |
| 8. |  ×  +  (triangle x ring + heart) | 47 |
| 9. |  ×  -  (star x heart - triangle) | 31 |
| 10. |  ×  +  (heart x ring + circle) | 21 |

Vault code: **4 0 1 7**