



The Varsity Trophy Case Cipher

Use your math skills to find the number value of each cheer symbol and decode the four-digit combination to the team trophy cabinet.

Name: _____ Date: _____

1 THE KEY

$$\bullet = 8 \quad + = \square \quad \triangle = \square \quad \heartsuit = 6 \quad \diamond = \square \quad \hexagon = 12$$

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.

$$\heartsuit - \triangle = 1$$

$$2 \diamond = 30$$

$$+ + \diamond = 29$$

3 CRACK THESE

$$1. 10 \triangle - \diamond = \square$$

$$2. \heartsuit \times \triangle + \diamond = \square$$

CODE 1

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

$$4. 10 \bullet - + = \square$$

CODE 2

$$5. \diamond \times \bullet - \heartsuit = \square$$

$$6. \heartsuit \times \diamond + \hexagon = \square$$

CODE 3

$$7. (\triangle + \diamond) \times \heartsuit = \square$$

$$8. 100 \bullet + \hexagon = \square$$

CODE 4

$$9. (+ + \hexagon) \times \bullet = \square$$

$$10. 100 + + \diamond = \square$$

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 brass megaphone lock.

Answer Key

The Varsity Trophy Case Cipher · Grade 4 Crack the Code

The key

 circle = **8**
  cross = **14** (hidden)
  triangle = **5** (hidden)
  heart = **6**
  diamond = **15** (hidden)
 hexagon = **12**

Every symbol is a whole number from 1 to 15.

- | | | |
|-----|---|-------------|
| 1. | $10 \triangle - \diamond$ (10 x triangle - diamond) | 35 |
| 2. | $\heartsuit \times \triangle + \diamond$ (heart x triangle + diamond) | 45 |
| 3. | $\triangle \times \oplus$ (triangle x cross) | 70 |
| 4. | $10 \bullet - \oplus$ (10 x circle - cross) | 66 |
| 5. | $\diamond \times \bullet - \heartsuit$ (diamond x circle - heart) | 114 |
| 6. | $\heartsuit \times \diamond + \hexagon$ (heart x diamond + hexagon) | 102 |
| 7. | $(\triangle + \diamond) \times \heartsuit$ ((triangle + diamond) x heart) | 120 |
| 8. | $100 \bullet + \hexagon$ (100 x circle + hexagon) | 812 |
| 9. | $(\oplus + \hexagon) \times \bullet$ ((cross + hexagon) x circle) | 208 |
| 10. | $100 \oplus + \diamond$ (100 x cross + diamond) | 1415 |

Vault code: **5 6 2 2**