

Championship Locker Code Challenge

Solve the mathematical equations using basketballs, hoops, jerseys, and whistles to discover the values of each symbol and crack the code to the equipment vault.

Name: _____ Date: _____

1 THE KEY

$$\begin{array}{l} \textcircled{?} = \square \\ \triangle = \square \\ \text{⚡} = 19 \\ \text{☾} = 18 \\ \square = \square \\ \star = \square \end{array}$$

Every symbol is a whole number from 1 to 20. A number in front of a shape means multiply: 2 stars = 2 x star. A small 2 after a shape means square it: star² = star 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.

$$\star^2 = 49$$

$$\bigcirc \times \text{⚡} - \text{☾} = 229$$

$$2 \blacksquare + \text{☾} = 28$$

$$\blacktriangle^2 = 4$$

3 CRACK THESE

$$1. \text{⚡}^2 - \blacksquare^2 = \square$$

$$2. (\bigcirc - \star) \times (\bigcirc + \star) = \square$$

CODE 1

$$3. (\blacktriangle + \bigcirc)^2 = \square$$

$$4. \blacktriangle^2 + \text{⚡} = \square$$

CODE 2

$$5. \text{☾}^2 - \blacksquare^2 = \square$$

$$6. (\bigcirc + \text{☾})^2 = \square$$

CODE 3

$$7. 2 \times (\bigcirc + \text{⚡}) - \blacktriangle = \square$$

$$8. \text{⚡}^3 - \bigcirc = \square$$

CODE 4

$$9. \star^2 + \text{☾}^2 = \square$$

$$10. \bigcirc^2 + \blacksquare^2 = \square$$

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 coach's vintage steel.

Answer Key

Championship Locker Code Challenge · Grade 6 Crack the Code

The key

 ring = **13** (hidden)
  triangle = **2** (hidden)
  lightning bolt = **19**
  moon = **18**
 square = **5** (hidden)
  star = **7** (hidden)

Every symbol is a whole number from 1 to 20.

- | | | |
|-----|---|-------------|
| 1. | $\text{lightning bolt}^2 - \text{square}^2$ (lightning bolt ² - square ²) | 336 |
| 2. | $(\text{ring} - \text{star}) \times (\text{ring} + \text{star})$ ((ring - star) x (ring + star)) | 120 |
| 3. | $(\text{triangle} + \text{ring})^2$ ((triangle + ring) ²) | 225 |
| 4. | $\text{triangle}^2 + \text{lightning bolt}$ (triangle ² + lightning bolt) | 23 |
| 5. | $\text{moon}^2 - \text{square}^2$ (moon ² - square ²) | 299 |
| 6. | $(\text{ring} + \text{moon})^2$ ((ring + moon) ²) | 961 |
| 7. | $2 \times (\text{ring} + \text{lightning bolt}) - \text{triangle}$ (2 x (ring + lightning bolt) - triangle) | 62 |
| 8. | $\text{lightning bolt}^3 - \text{ring}$ (lightning bolt ³ - ring) | 6846 |
| 9. | $\text{star}^2 + \text{moon}^2$ (star ² + moon ²) | 373 |
| 10. | $\text{ring}^2 + \text{square}^2$ (ring ² + square ²) | 194 |

Vault code: **0 3 1 6**