



The Scrap Metal Salvage Code

Assign the correct numerical value to each robotic part to calculate the four-digit combination.

Name: _____ Date: _____

1 THE KEY

$$\blacklozenge = 14 \quad \heartsuit = 8 \quad \bigcirc = 15 \quad \text{⚡} = \boxed{} \quad \triangle = \boxed{} \quad \boxed{?} = \boxed{}$$

Every symbol is a whole number from 1 to 20. 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.

$$2\blacktriangle + \bigcirc = 29$$

$$\blacksquare - \heartsuit = 1$$

$$2\text{⚡} + \bigcirc = 41$$

3 CRACK THESE

$$1. \blacksquare \times \blacklozenge \times \text{⚡} = \boxed{}$$

$$2. 3\blacktriangle + 2\blacklozenge = \boxed{}$$

CODE 1

$$3. (\bigcirc + \blacklozenge) \times \heartsuit = \boxed{}$$

$$4. \text{⚡} \times \blacklozenge - \bigcirc = \boxed{}$$

CODE 2

$$5. 10\text{⚡} - \bigcirc = \boxed{}$$

$$6. \text{⚡} \times \heartsuit + \bigcirc \times \blacktriangle = \boxed{}$$

CODE 3

$$7. \heartsuit + \blacktriangle \times \bigcirc = \boxed{}$$

$$8. \blacklozenge \times \blacktriangle + \blacksquare \times \heartsuit = \boxed{}$$

CODE 4

$$9. 3\bigcirc + 2\blacksquare = \boxed{}$$

$$10. (\blacksquare + \text{⚡}) \times \heartsuit = \boxed{}$$

4 THE VAULT CODE

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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 heavy steel storage.

Answer Key

The Scrap Metal Salvage Code · Grade 5 Crack the Code

The key

◆ diamond = 14 ♥ heart = 8 ○ ring = 15 ⚡ lightning bolt = 13 (hidden) ▲ triangle = 7 (hidden)
 ■ square = 9 (hidden)

Every symbol is a whole number from 1 to 20.

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|-----|--|------|
| 1. | ■ × ◆ × ⚡ (square x diamond x lightning bolt) | 1638 |
| 2. | 3▲ + 2◆ (3 x triangle + 2 x diamond) | 49 |
| 3. | (○ + ◆) × ♥ ((ring + diamond) x heart) | 232 |
| 4. | ⚡ × ◆ - ○ (lightning bolt x diamond - ring) | 167 |
| 5. | 10⚡ - ○ (10 x lightning bolt - ring) | 115 |
| 6. | ⚡ × ♥ + ○ × ▲ (lightning bolt x heart + ring x triangle) | 209 |
| 7. | ♥ + ▲ × ○ (heart + triangle x ring) | 113 |
| 8. | ◆ × ▲ + ■ × ♥ (diamond x triangle + square x heart) | 170 |
| 9. | 3○ + 2■ (3 x ring + 2 x square) | 63 |
| 10. | (■ + ⚡) × ♥ ((square + lightning bolt) x heart) | 176 |

Vault code: **9790**