

Find the Patterns! Addition

Addition facts are easier when you know the patterns! Take a look at the addition table below: Do you notice any patterns?

| | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| + | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 4 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 5 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 6 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 7 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 8 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 9 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 10 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 11 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 12 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

These patterns follow three main rules. Review the rules below and then complete the exercise below:

Rule One. The even numbers on the above table are 2, 4, 6, 8, 10, and 12. When you add any even number to another even number, your answer will be an even number.

EX:

$$2 + 2 = 4 \quad 4 \text{ is an even number.}$$

$$6 + 12 = 18 \quad 18 \text{ is an even number.}$$

Rule Two. The odd numbers on the above table are 1, 3, 5, 7, 9, and 11. When you add any even number to an odd number, your answer will be an odd number.

EX: $3 + 4 = 7$ 7 is an odd number.

Rule Three. When you add any number to itself, your answer will always be an even number.

EX:

$$4 + 4 = 8 \quad 8 \text{ is an even number.}$$

$$5 + 5 = 10 \quad 10 \text{ is an even number (Even though 5 is an odd number!)}$$

ANSWERS

Based on the three rules above, pay attention to whether the answer is even or odd. Put a check next to the answers that have to be wrong:

1. $4 + 8 = 12$ _____

2. $6 + 8 = 17$ _____

3. $42 + 24 = 65$ _____

4. $16 + 18 = 23$ _____

5. $102 + 86 = 188$ _____

6. $1002 + 144 = 1,143$ _____

7. $3 + 8 = 11$ _____

8. $3 + 12 = 16$ _____

9. $3 + 42 = 45$ _____

10. $3 + 34 = 38$ _____

11. $3 + 110 = 114$ _____

12. $3 + 3,654 = 3,657$ _____

13. $6 + 6 = 12$ _____

14. $66 + 66 = 132$ _____

15. $666 + 666 = 1,331$ _____

16. $24 + 24 = 48 =$ _____

17. $22 + 22 = 43 =$ _____

18. $3,432 + 3,432 = 6,865$ _____