Extra Questions

The Philomath Club

Introduction

1, 2, 4, 8, 16, 32, 64...

$1 \times 2 = 2$

$2 \times 2 = 4$

$4 \times 2 = 8$

$8 \times 2 = 16$

$16 \times 2 = 32$

$32 \times 2 = 64$

$64 \times 2 = 128$

3, 8, 13, 18, 23, 28, ...

$3 + 5 = 8$

$8 + 5 = 13$

$13 + 5 = 18$

$18 + 5 = 23$

$23 + 5 = 28$

$28 + 5 = 33$

$33 + 5 = 38$

71, 62, 53, 44, ...
What is the next number in the above pattern?

$$71 - 9 = 62$$

$$62 - 9 = 53$$

$$53 - 9 = 44$$

$$44 - 9 = 35$$

What is the missing value?

2, 5, 8, 11, 14, ?

$2 + 3 = 5$

$5 + 3 = 8$

$8 + 3 = 14$

$14 + 3 = 17$

11, 17, 23, ? , 35, 41

$11 + 6 = 17$

$17 + 6 = 23$

So $23 + 6 = 29$

$29 + 6 = 35$

$35 + 6 = 41$

63, 55, 47, ? , 31, 23

63 - 8 = 55

55 - 8 =47

47 - 8 = 39

39 - 8 = 31

31 - 8 = 23

Here is a number pattern. What is the missing value?

3, 6, 12, ?

$3 \times 2 = 6$

$6 \times 2 = 12$

$12 \times 2 = 24$

$24 \times 2 = 48$

$48 \times 2 = 96$

3, 10, 17, 24, 31, 38,
...

3 + 7 = 10

10 + 7 = 17

17 + 7 = 24

24 + 7 = 31

31 + 7 = 38

38 + 7 = 45

45 + 7 = 52

The first cube number is 1 cubed = 1^3 = 1 × 1 × 1 = 1

What is the tenth cube number?

$$10 \times 10 \times 10 = 1000$$

Here is a number pattern.
What is the missing number?

2, 8, 32, ? , 512, 2048

$$2 \times 4 = 8$$

$$8 \times 4 = 32$$

$$32 \times 4 = 128$$

$$128 \times 4 = 512$$

$$512 \times 8 = 4096$$

96, 48, 24, 12, ...
What is the next number in the above sequence?

$$98 / 2 = 48$$

$$48 / 2 = 24$$

$$24 / 2 = 12$$

$$12 / 2 = 6$$

$$6 / 2 = 3$$