

# Patterns & Algebra

Name:

1. What is the missing number from the pattern?

5, 11, 23, \_\_\_\_\_, 95, 191, 383

34                       47

46                       72

2. Enter the missing number to make the number sentence true.

$$6^2 \times 8 = \square - 5^2$$

3.  $a = 11$     $b = 9$     $c = 12$

$$\frac{a + b \times c}{2} =$$

59.5                       110

61.5                       120

4.  $a + b = 19$     $a \times c = 96$

$$c - b = 1$$

$a$ ,  $b$ , &  $c$  are whole numbers.

What is the value of ' $a$ '?

16                       10

6                       12

5. Find the sum of the numbers from 1 to 100.

4550                       5050

4750                       5250

6.  $a$  is double  $b$ .

$b$  is a third of  $c$

$d$  is 4 times  $a$

Which is true?

$d = 8 \times b$      $b = d \times 3$

$a = 2 \times c$      $b = a \times c$

7. What is the 25th number in this pattern?

25th

0.75, 1.5, 2.25, 3,

17.25                       18.75

17.75                       19.25

8. If  $a \times a \times a + a = 520$ , and ' $b$ ' is double  $a$ , which is true?

$a \times a = b^2$

$a \times b = 126$

$b \times b = 256$

$a + b \times b = 384$

9. Fill in the missing number.

225, 196, 169,  121.

10. What is the hundredth number in this pattern?

8, 14, 20, 26, 32, ..... 100th

is the hundredth number in the pattern.