**Fill in the missing numbers.**

|  |  |  |  |
| --- | --- | --- | --- |
| **1.** | **The rule for the pattern shown is** | **2.** | **The rule for the pattern shown is** |
|  |  |  |  |
| **3.** | **The rule for the pattern shown is** | **4.** | **The rule for the pattern shown is** |
|  |  |  |  |

**Find the next two numbers in each pattern.**

|  |  |  |  |
| --- | --- | --- | --- |
| **5.** | **The rule for the pattern shown is** | **6.** | **The rule for the pattern shown is** |
|  |  |  |  |
| **7.** | **The rule for the pattern shown is** | **8.** | **The rule for the pattern shown is** |
|  |  |  |  |

**Find the rule for the following pattern.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **9.** |  | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| **10.** |  | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |
| **11.** |  | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |

**Find the common difference and the next number.**

|  |  |  |  |
| --- | --- | --- | --- |
| **12.** |  | **13.** |  |
|  |  |  |  |
| **14.** |  | **15.** |  |
|  |  |  |  |

**Find the common ratio and the next number.**

|  |  |  |  |
| --- | --- | --- | --- |
| **16.** |  | **17.** |  |
|  |  |  |  |
| **18.** |  | **19.** |  |
|  |  |  |  |

**ANSWERS**

**Fill in the missing numbers.**

|  |  |  |  |
| --- | --- | --- | --- |
| **1.** | **The rule for the pattern shown is** | **2.** | **The rule for the pattern shown is** |
|  |  |  |  |
| **3.** | **The rule for the pattern shown is** | **4.** | **The rule for the pattern shown is** |
|  |  |  |  |

**Find the next two numbers in each pattern.**

|  |  |  |  |
| --- | --- | --- | --- |
| **5.** | **The rule for the pattern shown is** | **6.** | **The rule for the pattern shown is** |
|  |  |  |  |
| **7.** | **The rule for the pattern shown is** | **8.** | **The rule for the pattern shown is** |
|  |  |  |  |

**Find the rule for the following pattern.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **9.** |  | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |     **+**    The difference between successive values is always 1.  The rule is of the form |
| **10.** |  | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |       The difference between successive values is always 2.  The rule is of the form |
| **11.** |  | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |       The difference between successive values is always 3,  The rule is of the form |

**Find the common difference and the next number.**

|  |  |  |  |
| --- | --- | --- | --- |
| **12.** |  | **13.** |  |
|  | The pattern starts with and continued by adding to the last number each time.  The common difference is    The next number is |  | The pattern starts with and continued by adding to the last number each time.  The common difference is  The next number is |
| **14.** |  | **15.** |  |
|  | The pattern starts with and continued by adding to the last number each time.  The common difference is  The next number is |  | The pattern starts with and continued by adding to the last number each time.  The common difference is  The next number is |

**Find the common ratio and the next number.**

|  |  |  |  |
| --- | --- | --- | --- |
| **16.** |  | **17.** |  |
|  | The pattern starts with and continued by multiplying byto the last number each time. The common ratio is  The next number is |  | The pattern starts with and continued by multiplying byto the last number each time. The common ratio is  The next number is |
| **18.** |  | **19.** |  |
|  | The pattern starts with and continued by multiplying byto the last number each time. The common ratio is  The next number is |  | The pattern starts with and continued by multiplying byto the last number each time. The common ratio is  The next number is |