**Topic 2** – **Review**

**Generate and Analyze Patterns**

**Mathematician**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2.1 – I can identify and extend repeating geometric or repeating number pattern.**

**Vocabulary**

**1.** In the space below, draw the next three shapes in the **repeating pattern**.

\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_

**2**. Look at the repeating pattern above. What will the twelfth shape be?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3**. Write the next three numbers to continue the pattern.

3, 5, 5, 7, 3, 5, 5,

\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_

**4.** Paige and Grace were making bracelets. They started with a pattern of one orange and two blue beads. They used ten blue beads altogether. How many orange beads did they use?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2.2 – I can identify and extend whole number patterns involving addition and subtraction.**

**Find a rule for each pattern, then continue the pattern by filling in the blanks.**

**5.** 5, 11, 17, 23, \_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_

Rule:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6.** 775, 765, 755,\_\_\_\_\_\_\_,735,\_\_\_\_\_\_\_

Rule:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**7.** **Use the rule to create a pattern.**

Rule: Subtract 8

 44\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_

**2.3 – I can extend tables of ordered pairs for situations involving multiplication, addition, or subtraction.**

**Complete the tables.**

**8.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of Cats** | 3 | 4 | \_\_\_\_\_\_ | 6 | 7 |
| **Number of****Legs** | 12 | 16 | 20 | \_\_\_\_\_\_ | \_\_\_\_\_\_ |

**9.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Regular Price** | $25 | $27 | \_\_\_\_\_\_ | $31 | $33 |
| **Sale Price** | $17 | $19 | $21 | \_\_\_\_\_\_ | \_\_\_\_\_\_ |

**10.** If one lamp needs 2 bulbs, how many bulbs do 8 lamps need?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2.4 – I can find a rule and extend the table, given a table of number pairs.**

**Complete the tables and find the rule for each table.**

**11.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Erik’s Age** | 5 | 10 | \_\_\_\_\_\_ | 20 | 25 |
| **Laurie’s Age** | 15 | 20 | 25 | \_\_\_\_\_\_ | \_\_\_\_\_\_ |

Rule:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**12.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of Teams** | 3 | 5 | 8 | 9 | 12 |
| **Number of Players** | 15 | 25 | 40 | \_\_\_\_\_\_ | \_\_\_\_\_\_ |

Rule:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**13.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of cookies** | 20 | 30 | \_\_\_\_\_\_ | 15 | 45 |
| **Number of baskets** | 4 | 6 | 8 | \_\_\_\_\_\_ | \_\_\_\_\_\_ |

Rule:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2.5 – I can extend patterns of cubes or tiles.**

**14. Draw the next two towers to complete the pattern below, and fill in the table.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of stories** | 1 | 2 | 3 | 4 | 5 |
| **Number of blocks** | 2 | 3 | 4 | \_\_\_\_\_\_ | \_\_\_\_\_\_ |

Rule:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**15. Complete the in/out table and find the rule.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **IN** | 5 | \_\_\_\_\_ | 7 | 8 | \_\_\_\_\_\_ |
| **OUT** | 40 | 48 | \_\_\_\_\_\_ | \_\_\_\_\_\_ | 72 |

Rule:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2.6 – I can use the strategies Act It Out and Use Reasoning to solve problems.**

**16.** Jackson has 25 books in all. He has 9 biographies, and 8 more fantasies than mysteries. Use counters or draw pictures to help you.

How many biographies does he have? \_\_\_\_\_\_

How many fantasies does he have? \_\_\_\_\_\_

How many mysteries does he have? \_\_\_\_\_\_

**17.** Find the number of each kind of object in Molly’s collection.

**Molly’s Collection of Stuffed Animals**

7 dogs

4 fewer cats than bears

17 stuffed animals in all

How many dogs does she have? \_\_\_\_\_\_

How many cats does she have? \_\_\_\_\_\_

How many bears does she have? \_\_\_\_\_