## **Exploring the World of Math**

| Name: | Date: |  |
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## **Sequences**

1. Write a sequence from 1 to 20 that advances by 1

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2. Write a sequence from 1 to 20 that advances by 3

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3. Write a Fibonacci sequence from 1 to 610

| F <sub>1</sub> | F <sub>2</sub> | F <sub>3</sub> | $F_4$ | <b>F</b> <sub>5</sub> | F <sub>6</sub> | <b>F</b> <sub>7</sub> | F <sub>8</sub> | F <sub>9</sub> | F <sub>10</sub> | F <sub>11</sub> | F <sub>12</sub> | F <sub>13</sub> | F <sub>14</sub> | F <sub>15</sub> |
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- 4. Compute the following:
  - a. F<sub>7</sub>
  - b.  $F_7 + 5$
  - c. F<sub>10-2</sub>
  - d.  $F_{40/8}$
  - e.  $F_2 + F_4 + F_6$
- 5. Compute the next Fibonacci number after 34 and 55
- 6. Compute the Fibonacci number before 34 and 55
- 7. Compute the following:
  - a.  $\sqrt{16}$
  - b.  $\sqrt{5}$
  - c. 7<sup>2</sup>
  - d.  $(2+3)^2$
  - e.  $(1+\sqrt{9})^2$
  - f. 1.618<sup>5</sup>

## **Homework**

- 1. Describe three examples of Fibonacci sequence in nature?
- 2. Describe three examples of Fibonacci sequence in manmade objects?