



# Math on the Fly!



NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## Geometric Sequences and Series

For problems 1–6, find the next two terms of each geometric sequence.

1. 3, 15, 75, \_\_, \_\_

2. 16, 8, 4, \_\_, \_\_

3. -6, 18, -54, \_\_, \_\_

4. -243, -81, -27, \_\_, \_\_

5. 8, 12, 18, \_\_, \_\_

6.  $\frac{3}{4}$ ,  $\frac{6}{12}$ ,  $\frac{12}{36}$ , \_\_, \_\_

Find the sum of the first 5 terms of each geometric series.

7.  $5 + 15 + 45 + \dots$

8.  $200 + 100 + 50 + \dots$

9.  $(-3) + (12) + (-48) + \dots$

10.  $(-625) + (-125) + (-25) + \dots$

11.  $2 + 5 + 12.5 + \dots$

12.  $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots$

## SOLUTIONS

1. 375, 1875 (Multiply 5)

2. 2, 1 (Multiply 1/2 or Divide by 2)

3. 162, -486 (Multiply -3)

4. -9, -3 (Multiply 1/3 or Divide by 3)

5. 27, 40.5 (Multiply 1.5)

6.  $\frac{24}{108}$ ,  $\frac{48}{324}$  (Multiply 2/3)

7.  $5 + 15 + 45 + 135 + 405 = 605$

8.  $200 + 100 + 50 + 25 + 12.5 = 387.5$

9.  $(-3) + (12) + (-48) + (192) + (-768) = -615$

10.  $(-625) + (-125) + (-25) + (-5) + (-1) = -781$

11.  $2 + 5 + 12.5 + 31.25 + 78.125 = 128.875$

12.  $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \frac{1}{32} = \frac{31}{32}$  or 0.96875