Explicit Formulas from Tables and Terms

Directions: Find the common ratio and write an explicit formula. Show all work.

1. The table shows mass (in grams) of a radioactive isotope for days 1 through 4.

Day	1	2	3	4
Mass (grams)	1458	486	162	54

Find the common ratio, write an explicit formula, and find the value at day 6.

2. The table shows people infected by the flu for weeks 1 through 4.

Week	1	2	3	4
People Infected	12	48	192	768

Find the common ratio, write an explicit formula, and find the value at week 5.

3. The table shows value in dollars of a used car from years 1 through 4.

Year	1	2	3	4
Value ($)	2400	1200	600	300

Find the common ratio, write an explicit formula, and find the value at year 5.

4. The table shows cells of bacteria for hours 1 through 4 during an experiment.

Hour	1	2	3	4
Cells	7	21	63	189

Find the common ratio, write an explicit formula, and find the value at hour 6.

5. A geometric sequence has $a_3 = 5$ and $a_6 = 40$. Find the common ratio and write an explicit formula for the sequence.

6. A geometric sequence has $a_2 = 12$ and $a_5 = 324$. Find the common ratio and write an explicit formula for the sequence.

7. A geometric sequence has $a_4 = 7$ and $a_7 = 56$. Find the common ratio and write an explicit formula for the sequence.

8. A geometric sequence has $a_3 = 160$ and $a_6 = 20$. Find the common ratio and write an explicit formula for the sequence.

9. A geometric sequence has $a_2 = 6$ and $a_5 = -48$. Find the common ratio and write an explicit formula for the sequence.

10. A geometric sequence has $a_2 = 9$ and $a_5 = \frac{9}{8}$. Find the common ratio and write an explicit formula for the sequence.