Structure in Expressions - Worksheet 4

Identify the sequence as arithmetic, geometric, or neither:

1. $0, 1, 1, 2, 3, 5, 6, 13, ...$

2. $-16, -13, -10, -7, -4, -1, 2, ...$

3. $-10, -20, -40, -80, -160, -320, ...$

4. $1, 0.1, 0.01, 0.001, 0.0001, ...$

5. $\frac{a^2}{b^5}, \frac{a}{b^4}, \frac{1}{b^3}, \frac{1}{ab^2}, \frac{1}{a^2b}, \frac{1}{a^3}, \frac{b}{a^4}, \frac{b^2}{a^5}, ...$

Use the geometric series formula to calculate the sum of the *first 5* terms of the following geometric sequences.:

6. $-1.5, -3, -6, -12, -24, -48....$

7. $0.3, -0.9, 2.7, -8.1, 24.3, ...$

8. $1, \frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{16}....$

9. $1, \frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{16}....$

10. $\frac{a^2}{b^5}, \frac{a}{b^4}, \frac{1}{b^3}, \frac{1}{ab^2}, \frac{1}{a^2b}, \frac{1}{a^3}, \frac{b}{a^4}, \frac{b^2}{a^5}, ...$
