**4.** Find the next four terms of the arithmetic sequence 42, 37, 32, ... .

**5.** Find the 27th term of an arithmetic sequence for which $a_1 = 2$ and $d = 6$.

**7.** Find the sum of the arithmetic series for which $a_1 = 7$, $n = 31$, and $a_n = 127$.

**8.** Find the next two terms of the geometric sequence $\frac{1}{81}, \frac{1}{27}, \frac{1}{9}, \ldots$ .

**9.** Find the sixth term of the geometric sequence for which $a_1 = 5$ and $r = -2$.

**11.** Find the sum of the geometric series for which $a_1 = 125$, $r = \frac{2}{5}$, and $n = 4$.

**Find the sum of each series, if it exists.**

**12.** $\sum_{k=3}^{15} (14 - 2k)$

**13.** $\sum_{n=1}^{\infty} \frac{1}{3}(-2)^{n-1}$

**14.** $91 + 85 + 79 + \ldots + (-29)$

**15.** $12 + (-6) + 3 - \frac{3}{2} + \ldots$

**Find the sum of each geometric series.** *(Lessons 11-4 and 11-5)*

**1.** $a_1 = 5, r = 3, n = 12$

**2.** $\sum_{n=1}^{6} 2(-3)^{n-1}$

**3.** $\sum_{n=1}^{\infty} 8\left(\frac{2}{3}\right)^{n-1}$

**4.** $5 + 1 + \frac{1}{5} + \ldots$

**Find the sum of each arithmetic series.**

**29.** $6 + 13 + 20 + 27 + \ldots + 97$

**30.** $7 + 14 + 21 + 28 + \ldots + 98$

**31.** $34 + 30 + 26 + \ldots + 2$

**32.** $16 + 10 + 4 + \ldots + (-50)$

**33.** $\sum_{n=1}^{6} (2n + 11)$

**34.** $\sum_{n=1}^{5} (2 - 3n)$

**35.** $\sum_{k=7}^{11} (42 - 9k)$

**36.** $\sum_{t=19}^{23} (5t - 3)$

**37.** $\sum_{i=1}^{300} (7i - 3)$

**38.** $\sum_{k=1}^{150} (11 + 2k)$