

Evaluate the sum of the series, without simply adding the terms.

1.  $6+9+12+\dots+252$

2.  $\sum_{n=1}^7 (10n-12)$

3.  $\sum_{n=1}^{\infty} (9n-11)$

4.  $\frac{625}{8} - \frac{125}{4} + \frac{25}{2} - 5 \dots$

5.  $1+5+9+\dots+109$

6.  $-4-8-16-32-\dots-256$

$$7. \sum_{n=1}^{10} -3(2)^{n-1}$$

$$8. a_1 = -3, d = 6, n = 13$$

$$9. \frac{4}{3} + \frac{4}{15} + \frac{4}{75} + \dots$$

$$10. a_1 = 2, r = \frac{5}{2}, n = 8$$

$$11. 1 - 4 + 16 - 64 + \dots$$

$$12. -\frac{4}{3} - \frac{2}{3} - \frac{1}{3} - \frac{1}{6} - \dots$$