

Calculators may be used.

Exer. 1-3: Express the sum in terms of summation notation.

1. $\frac{2}{3} + \frac{4}{7} + \frac{6}{11} + \frac{8}{15} + \frac{10}{19}$

2. $14 + 17 + 20 + 23 + 26 + \dots + 212$

3. $\frac{1}{5} + \frac{3}{7} + \frac{7}{9} + \frac{15}{11} + \frac{31}{13}$

Exer. 4-5: Find the number of terms in the arithmetic sequence with the given conditions.

4. $a_1 = -3, d = \frac{1}{5}, S_n = \frac{231}{5}$

5. $a_6 = -3, d = 0.2, S_n = -33$

6. Insert three arithmetic means between 2 and 10.

7. Insert two arithmetic means between 3 and -5.

8. $\sum_{n=1}^{\infty} 2\left(\frac{2}{3}\right)^n$ equals what number?

9. $\sum_{n=1}^{23} 0.7(1.2)^n$ equals what number accurate to 5-decimal places?

10. $\sum_{n=1}^{53} (3n + 4)$ equals what number??

Exer. 11-12: Write using Sigma, then Find the exact rational number represented by the repeating decimal

11. 2.3686868 ...

12. 32.9655555 ...

13. Find the 2 geometric means between 2 and 500.