

1. Evaluate: $\sum_{i=0}^4 23i^2$

1.

2. Evaluate: $\sum_{i=2}^4 3^{i+1}$

2.

3. Evaluate: $2\sum_{k=1}^6 \sin\left(\frac{k\pi}{4}\right)$

3.

4. Evaluate: $\sum_{k=1}^3 \left(\frac{2k+3}{k}\right)$

4.

5. Evaluate: $\sum_{b=0}^3 (2 - (b)i)$

5.

6. Evaluate: $\sum_{r=4}^7 {}_{11}C_r$

6.

7. Evaluate: $\frac{1}{3}\sum_{n=0}^5 n!$

7.

8. Evaluate: $\sum_{m=1}^3 (2m-1)^{m-1}$

8.

9. A ball is dropped from a height of 8 feet and allowed to bounce. Each time the ball bounces, it bounces back to half of its previous height. The vertical distance the ball travels, d , is given by the formula $d = 8 + 16\sum_{k=1}^n \left(\frac{1}{2}\right)^k$, where n is the number of bounces.

Based on this formula, what is the total vertical distance that the ball has traveled after four bounces?

9.