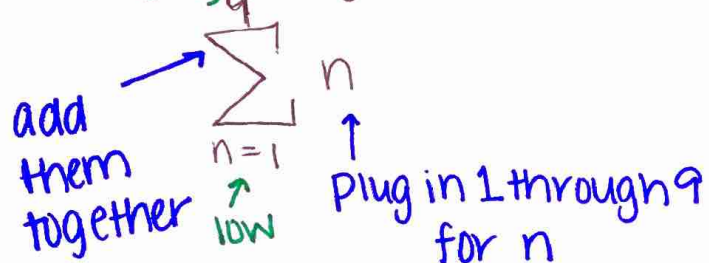


sigma notation

AZ

sequence: $1 + 2 + 3 + 4 \dots + 9$

high $\rightarrow 9$ \rightarrow goes 1-9



examples

1. expand

a) $\sum_{n=5}^9 n^2 = 5^2 + 6^2 + 7^2 + 8^2 + 9^2$

b) $\sum_{n=2}^5 2n-1 = 2(2)-1 + 2(3)-1 + 2(4)-1 + 2(5)-1$
 $= 3 + 5 + 7 + 9$

c) $\sum_{n=1}^4 2(2)^{n-1} = 2(2)^0 + 2(2)^1 + 2(2)^2 + 2(2)^3$

2. write with sigma notation

a) $\frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \frac{1}{6} + \frac{1}{7} = \sum_{n=3}^7 \frac{1}{n}$

b) $5 + 9 + 13 + \dots + u_{22} = \sum_{n=1}^{22} 3n+2$

c) $\frac{1}{2^2} + \frac{1}{2^3} + \frac{1}{2^4} + \frac{1}{2^5} = \sum_{n=2}^5 \frac{1}{2^n}$