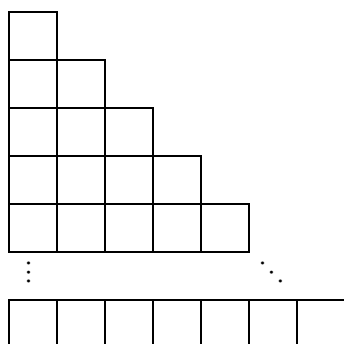


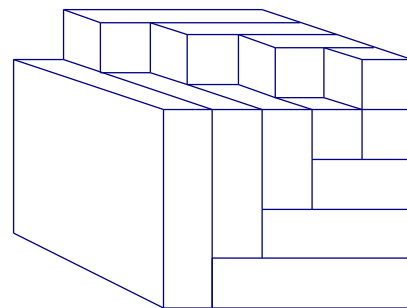
Date:

Draw and explain the visual proofs for each identity.

$$\sum_{i=1}^n i$$



$$\sum_{i=1}^n i^2$$



$$\sum_{i=1}^n i^3 = 1^3 + 2^3 + 3^3 + \dots + n^3 = (1 + 2 + 3 + \dots + n)^2 = \left[\frac{n(n+1)}{2} \right]^2$$

$$\text{Ex. } 1^3 + 2^3 + 3^3 + 4^3 = (1 + 2 + 3 + 4)^2 = \left(\frac{4(5)}{2} \right)^2$$