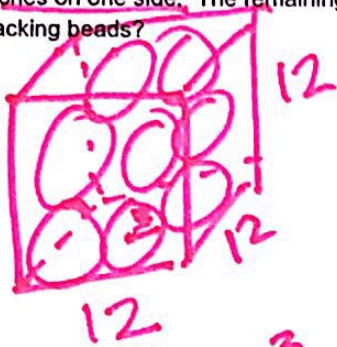


EX3. Eight wooden spheres, each with a radius of 3 inches, are packed snugly into a square box that is 12 inches on one side. The remaining space is filled with packing beads. What is the volume occupied by the packing beads?



$$V = lwh$$

$$V = 12 \cdot 12 \cdot 12$$

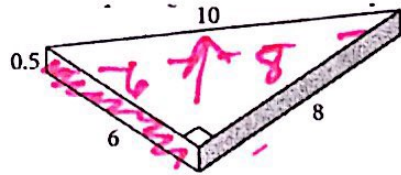
$$V = 1728$$

$$V = \frac{4\pi r^3}{3}$$

$$V = \frac{4\pi (3)^3}{3} = (113.097)8 = 904.72$$

$$1728 - 904.72 = 823.28 \text{ in}^3$$

EX4. You are producing 500 of these metal wedges, and you must electroplate them with a thin layer of high-conducting silver (surface area). The measurements shown are in centimeters. Find the total cost for silver, if silver plating costs \$3 for every 200 square centimeters.



$$SA = \left(\frac{6 \cdot 8}{2} \right) 2 + 0.5(6) + 8(.5) + 10(.5)$$

$$SA = (60) 500 = \frac{30000}{200} = 150 \times 3$$

$$\boxed{\$450}$$