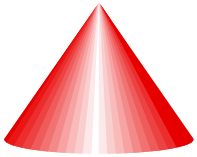
VOLUME OF PYRAMIDS
SKILLS QUESTIONS

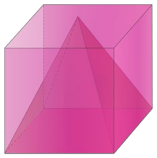
Q1. Calculate the volume (in m^3) of stone in this square-based pyramid ornament with the following dimensions.

	SIDE OF SQUARE BASE	HEIGHT	VOLUME
(a)	60 m	40 m	
(b)	45 m	35 m	
(c)	75 m	60 m	
(d)	63 m	50 m	
(e)	68 m	59 m	



Q2. A manufacturer makes 5 different sizes of children's toy blocks. Calculate the amount of plastic (in cm^3) required for each sized block.

	DIAMETER	HEIGHT	VOLUME
(a)	9 cm	10 cm	
(b)	15 cm	15 cm	
(c)	20 cm	21 cm	
(d)	24 cm	24 cm	
(e)	30 cm	16 cm	



Q3. A pyramid sits neatly inside this cube. Deduce a formula for the amount of space inside the cube but outside the pyramid.

Q4. A coffee cup has the shape of a truncated cone as shown in the picture. The top diameter is 10 cm. The bottom diameter is 5 cm. The height of the cup is 12 cm. When full, how much coffee can it hold? (Hint; Draw a side-view diagram.)

ANSWERS

Q1. (a) 48000
(b) 23625
(c) 112500
(d) 66150
(e) 90938.67

Q2. (a) 211.95
(b) 281.25
(c) 2198
(d) 3617.28
(e) 3768

Q3. $V = S^3 \div 3 \times 2$

Q4. 549.5 mL