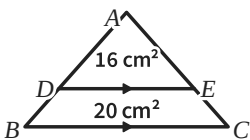
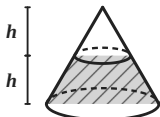
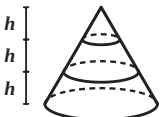


Similar Shapes: Area and Volume *ramp up*

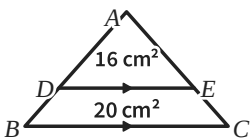
ANSWERS

a Surface areas A and $4A$. Small volume V. Find the large volume. $8V$ a volume in terms of V	b Areas 20 cm^2 and 45 cm^2. Small perimeter 12 cm. Find the large perimeter. 18 cm a perimeter from two areas	c Areas 10 cm^2 and 30 cm^2. Find exactly the large side that matches 4 cm. $4\sqrt{3}\text{ cm}$ a surd length scale factor	d Lengths in the ratio $2 : 3$ give areas 18 cm^2 apart. Find the small area. 14.4 cm^2 an area from the difference
e A to B: lengths $\times 2$. B to C: areas $\times 9$. Volumes A to C are $\times$ what? 216 two enlargements: multiply	f Surface areas are in the ratio $1 : 2$. Find the ratio of the volumes exactly. $1 : 2\sqrt{2}$ a volume ratio in surd form	g The volume scale factor is 2. Find the area scale factor exactly. $\sqrt[3]{4}$ an area factor through a cube root	h The volume increases by 33.1%. By what percentage do the lengths increase? 10% a percentage back through a cube
i Heights are $x\text{ cm}$ and $(x + 3)\text{ cm}$. Volumes are 8 cm^3 and 27 cm^3. Find x. $x = 6$ a height in algebra from volumes	j Find $AD : DB$  $2 : 1$ lengths from the areas of the parts	k Find the volume ratio  $\text{top} : \text{bottom} = 1 : 7$ the part left over as a ratio	l Find the volume ratio  $1 : 7 : 19$ a cone cut into three

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Similar Shapes: Area and Volume *ramp up*

ANSWERS

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