

Name: _____

Solid Geometry

1. Convert the following volumes to the units given in brackets.

(a) $7.6 \text{ l} = \text{_____ cm}^3$	(b) $8.9 \text{ cm}^3 = \text{_____ mm}^3$	(c) $285\,000 \text{ cm}^3 = \text{_____ m}^3$
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2. Drag the correct volume formulae to relevant diagram.

$\pi r^2 h$

Base Area x Height

$\frac{2}{3} \pi r^3$

$\frac{1}{3} w l h$

$\frac{1}{3} \pi r^2 h$

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

(a) _____	(b) _____	(c) _____
(d) _____	(e) _____	(f) _____

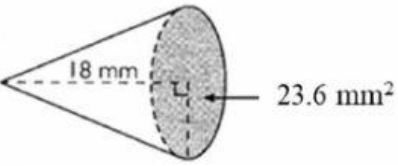
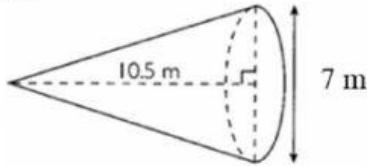
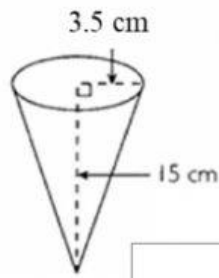
3. Find the volume of prism.

(a) _____ m³	(b) _____ cm³	(c) _____ cm³
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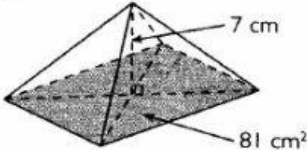
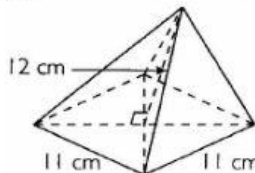
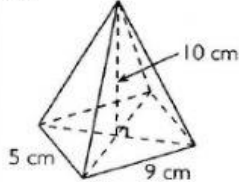
4. Find the volume of cylinder. [use $\pi = \frac{22}{7}$]

(a) _____ cm³	(b) _____ m³	(c) _____ m³ [2d.p]
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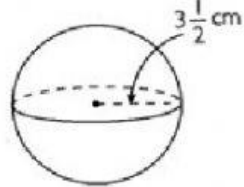
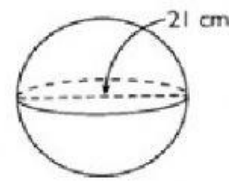
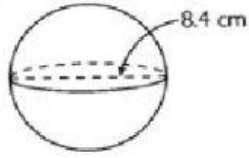
5. Find the volume of cone. [use $\pi = \frac{22}{7}$]

(a)  [1d.p] mm³	(b)  [2d.p] m³	(c)  [2d.p] cm³
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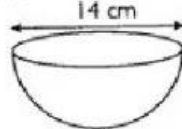
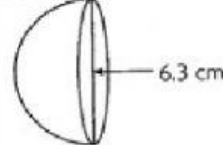
6. Find the volume of pyramid.

(a)  cm³	(b)  cm³	(c)  cm³
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7. Find the volume of sphere. [use $\pi = \frac{22}{7}$]

(a)  [2d.p] cm³	(b)  cm³	(c)  [2d.p] cm³
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8. Find the volume of hemisphere. [use $\pi = \frac{22}{7}$]

(a)  [2d.p] cm³	(b)  [2d.p] cm³	(c)  [2d.p] cm³
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9. Calculate the height of each prism based on the given volume and base area.

(a) Volume = 216 m^3 Base area = 48 m^2 [1d.p] m	(b) Volume = 2000 cm^3 Base area = 160 cm^2 [1d.p] cm	(c) Volume = $10\,500 \text{ mm}^3$ Base area = 560 mm^2 [2d.p] mm
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10. Calculate the base area of each prism based on the given volume and height.

(a) Volume = 342 cm^3 Height = 7.5 cm [1d.p] cm^2	(b) Volume = $1\,192.8 \text{ cm}^3$ Height = 14 cm [1d.p] cm^2	(c) Volume = 133 m^3 Height = 3.8 m [1d.p] m^2
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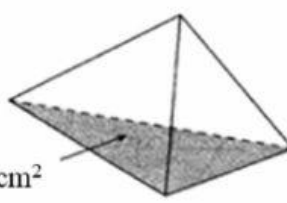
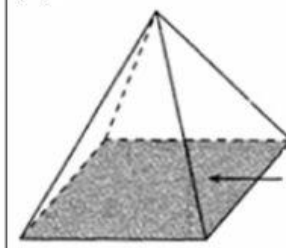
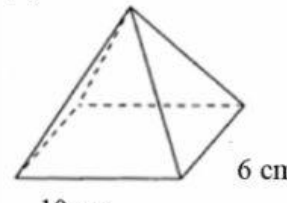
11. Find the height of each cylinder based on the given volume and radius. [use $\pi = \frac{22}{7}$]

(a) Volume = 550 cm^3 Radius = 5 cm [2d.p] cm	(b) Volume = 847 cm^3 Radius = 3.5 cm [2d.p] cm	(c) Volume = 69.3 cm^3 Radius = 2.1 cm [1d.p] cm
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12. Find the radius of each cylinder based on the given volume and height. [use $\pi = \frac{22}{7}$]

(a) Volume = 396 cm^3 Height = 14 cm [1d.p] cm	(b) Volume = 550 cm^3 Height = 7 cm [1d.p] cm	(c) Volume = $2\,772 \text{ cm}^3$ Height = 8 cm [1d.p] cm
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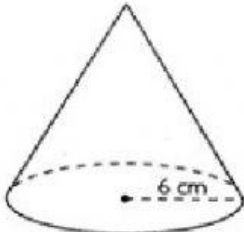
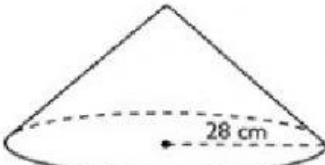
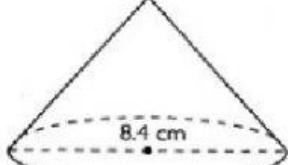
13. Find the height of each of the following pyramids.

(a)  540 cm^2 Volume = $2\,700 \text{ cm}^3$ cm	(b)  42.6 cm^2 Volume = 284 cm^3 cm	(c)  10 cm 6 cm Volume = 150 cm^3 [1d.p] cm
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14. Find the base area of each pyramid based on the given volume and height.

(a) Volume = 480 cm^3 Height = 9 cm cm²	(b) Volume = 1.6 m^3 Height = 0.6 m m²	(c) Volume = $6\,741 \text{ m}^3$ Height = 21 m m²
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15. Find the height of each of the following cones. [use $\pi = \frac{22}{7}$]

(a)  Volume = 528 cm^3 cm	(b)  Volume = $6\,160 \text{ cm}^3$ [1d.p] cm	(c)  Volume = 92.4 cm^3 cm
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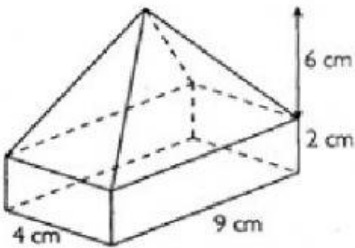
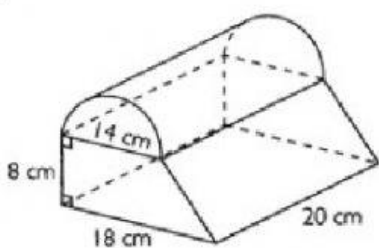
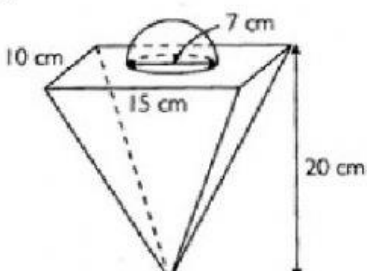
16. Find the radius of each cone based on the given volume and height. [use $\pi = \frac{22}{7}$]

(a) Volume = 264 cm^3 Height = 7 cm cm	(b) Volume = 154 cm^3 Height = 12 cm [1d.p] cm	(c) Volume = $1\,188 \text{ m}^3$ Height = 14 m m
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17. Calculate the radius of a sphere or hemisphere based on the given volume. . [use $\pi = \frac{22}{7}$]

(a) Volume of a sphere = $268\frac{4}{21} \text{ cm}^3$ cm	(b) Volume of a sphere = $33\frac{11}{21} \text{ cm}^3$ cm	(c) Volume of a hemisphere = $56\frac{4}{7} \text{ cm}^3$ cm
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18. Find the volume of each of the following composite solids. [use $\pi = \frac{22}{7}$]

(a)  cm³	(b)  cm³	(c)  cm³
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