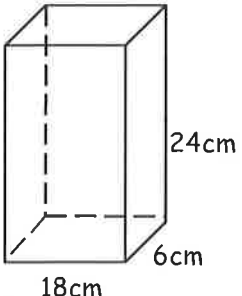
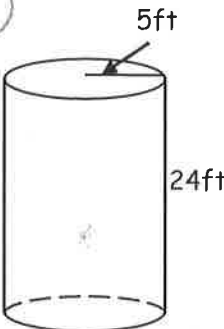
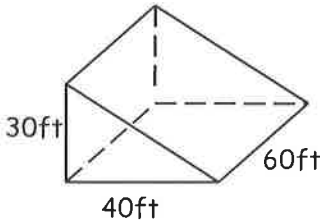
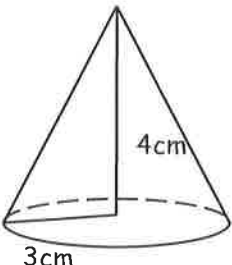


Directions: Find the total area and volume of each shape. Show all work. Leave all answers in π form and/or simplified radical form.

	Total Area	Volume
<p>1)</p> 	$TA = LA + 2B$ $TA = (48 \cdot 24) + 2(108)$ $1152 + 216$ $TA = 1368 \text{ cm}^2$	$V = 108(24)$ $V = 2592 \text{ cm}^3$
<p>2)</p> 	$TA = LA + 2(B)$ $TA = 2\pi \cdot 5 \cdot 24 + 2\pi 5^2$ $TA = 240\pi + 50\pi$ $TA = 290\pi \text{ ft}^2$	$V = \pi \cdot 5^2 \cdot 24$ $V = 600\pi \text{ ft}^3$
<p>3)</p> 	$TA = LA + 2B$ $TA = (120 \cdot 60) + 2(600)$ $7200 + 1200$ 8400 ft^2	$V = B(h)$ $V = 600(60)$ $V = 36,000 \text{ ft}^3$
<p>4)</p> 	$TA = LA + B$ $LA = \pi \cdot 3 \cdot 5$ 15π $\frac{B}{\pi r^2}$ 9π $TA = 15\pi + 9\pi$ $= 24\pi \text{ cm}^2$	$V = \frac{1}{3}\pi r^2 h$ $V = \frac{1}{3}\pi \cdot 9 \cdot 4$ $V = 12\pi \text{ cm}^3$

Geometry/Trig 2
12.1 - 12.3 worksheet

	Total Area	Volume
<p>5)</p>	$LA = \frac{1}{2} p l$ $LA = \frac{1}{2} \cdot 40 \cdot 13 = 10 \cdot 13 = 130$ $LA = 260$ $TA = LA + B$ $260 + 100 = 360 \text{ m}^2$	$V = \frac{1}{3} B h$ $V = \frac{1}{3} 100 \cdot 12$ $V = 400 \text{ cm}^3$
<p>6)</p>	$TA = SA + 2B$ $TA = (52 \cdot 13) + 2(169)$ $676 + 338$ 1014 cm^2	$V = B h$ $V = 169(13)$ $V = 2197 \text{ cm}^3$
<p>7) The base is a regular hexagon.</p>	$TA = SA + 2B$ $TA = (24 \cdot 7) + 2 \cdot \frac{1}{2} (2\sqrt{3})(24)$ $168 + 48\sqrt{3}$ $168 + 48\sqrt{3} \text{ ft}^2$	$V = B h$ $V = 24\sqrt{3} \cdot 7$ $V = 168\sqrt{3} \text{ ft}^3$
<p>8)</p>	<p>NOTE: Do not add in the base of the cone when calculating the T.A, nor the top base of the cylinder. Imagine the solid is completely hollow.</p> $\text{Area of cone: } \pi \cdot 6 \cdot 10 = 60\pi$ $\text{Area of cylinder: } 2\pi \cdot 6 \cdot 11 + \pi 6^2 = 132\pi + 36\pi = 168\pi$ $\text{Total Area} = 228\pi \text{ in}^2$	$V_{\text{cone}} = \frac{1}{3} \pi \cdot 6^2 \cdot 8 = 96\pi$ $V_{\text{cylinder}} = \pi 6^2 \cdot 11 = 396\pi$ $\text{Total Volume} = 96\pi + 396\pi = 492\pi \text{ in}^3$