\[ 1 \text{ ft}^3 \approx 7.5 \text{ gallons} \quad 1 \text{ ft}^3 \approx 62.4 \text{ lbs} \]

A king-sized waterbed mattress measures 5.5 ft by 6.5 ft by 8 inches deep. To the nearest pound, how much does the water in this waterbed weigh?

A hot tub was built in the shape of a regular hexagonal prism. The length of each side of the hexagon is 3 ft and the height of the hot tub is also 3 ft. Use the chart in your group to determine how long it will take the water in the hot tub to go from 93°F to 103°F?

<table>
<thead>
<tr>
<th>Gallons</th>
<th>350</th>
<th>400</th>
<th>450</th>
<th>500</th>
<th>550</th>
<th>600</th>
<th>650</th>
<th>700</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minutes</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>18</td>
</tr>
</tbody>
</table>
Find the volume of the rectangular prism with a conical hole bored out of it. The diameter of the hole is 50 \textit{mm}.
Question #2

Find the volume of the regular hexagonal prism and pyramid below.
Question #3

Find the volume of a triangular prism with equilateral triangular bases with side lengths of 4 cm. The height of the prism is twice that of the triangle side lengths.
Question #4

If you cut a 1 inch square out of each corner of an 8\(\frac{1}{2}\)" by 11" piece of paper (a normal size) and fold it into a box without a lid, what is the volume of the container?
Question #5

If you roll an $8\frac{1}{2}$" by 11" piece of paper into a cylinder by bringing the two longer sides together (hotdog style), you get a tall, thin cylinder. If you roll an $8\frac{1}{2}$" by 11" piece of paper by bringing the two shorter sides together, you get a short, fat cylinder. Which of the two cylinders has the greater volume and by how much?
Question #6

A sealed rectangular container 6 cm by 12 cm by 15 cm is sitting on its smallest face. It is filled with water up to a level 5 cm from the top. How many centimeters from the bottom (a new height) will the water level reach if the container is placed on its largest face?
A trapezoidal pyramid has a volume of $3168 \, cm^3$. The height of the pyramid is $36 \, cm$. The lengths of the two bases of the trapezoidal base are $20 \, cm$ and $28 \, cm$.

What is the height of the trapezoidal base?