For each problem find the missing dimensions ( $\mathrm{r}, \mathrm{H}, \ell$ and $\theta$ ) of the cone and draw both the net and cone. Then find the surface area and volume of the cone. Approximate values to hundredths.

1. The diameter of the base of a cone is 20 cm , the slant height is 15 cm .
2. The slant height is 17 m and the height is 15 m .
3. The lateral surface is made from a sector with arc length 22 cm ; the slant height is 5 cm .
4. The height of the cone is 70 in and the radius of the base is 32 in .
5. The lateral surface is made from a semicircle with radius 18 cm .
6. The lateral surface is made from a sector with area 1003 square inches, the angle measure of the sector is 200 degrees.
7. The angle measure of the sector that forms the lateral surface is 80 degrees, the height of the cone is 5 ft .
