

1. A solid metallic sphere of diameter 12 cm is melted and recast into a cone of radius 8 cm. Find the height of the cone.
2. A solid metallic sphere of diameter 14 cm is melted and recast into 8 small spheres. Find the radius of the sphere so formed.
3. A metallic sphere is casted by melting 504 cones each of diameter 3.5 cm and height 3 cm. Find the diameter of the sphere.
4. A well of diameter 4 m is dug 21 m deep. The earth taken out of it has been spread evenly all around it in the shape of a circular ring of width 3 m to form an embankment. Find the height of the embankment.
5. Water in a canal, 5.4 m wide and 1.8 m deep, is flowing with a speed of 25 km/hour. How much area can it irrigate in 40 minutes, if 10 cm of standing water is required for irrigation?
6. A metallic solid sphere of radius 10.5 cm is melted and then recast into smaller solid cones, each of radius 3.5 cm and height 3 cm. How many cones will be made?
7. A solid cylinder of diameter 12 cm and height 15 cm is melted and recast into 12 toys in the shape of a right circular cone mounted on a hemisphere. Find the radius of the hemisphere and the total height of the toy, if the height of the conical part is thrice its radius.
8. A copper rod of diameter 2 cm and length 10 cm is drawn into a wire of uniform thickness and length 10 m. Find the thickness of the wire.