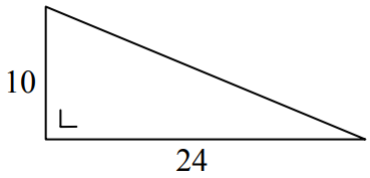
Area, Perimeter & Volume

(a) The right-angled triangle shown in the diagram has sides of length 10 cm and 24 cm.



(i) Find the length of the third side

(ii) Hence, find the perimeter of the triangle.

(b) A team trophy for the winners of a football match is in the shape of a sphere supported on a cylindrical base, as shown. The diameter of the sphere and of the cylinder is 21 cm.

(i) Find the volume of the sphere, in terms of π.

(ii) The volume of the trophy is $6174\pi\ cm^3$. Find the height of the cylinder.