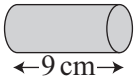
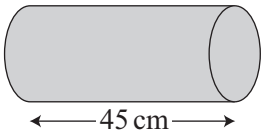
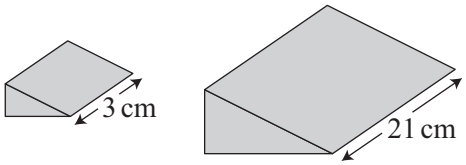
# TASK **4.13**

**1.** Find the volume of the larger of these 2 similar cylinders.

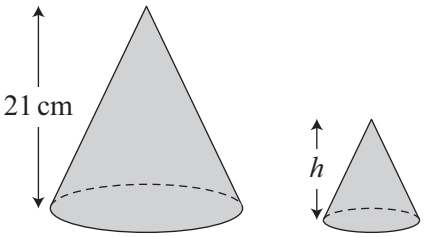



**2.** These prisms are similar. The total surface area of the smaller prism is 19 $cm^2$. Find the total surface area of the larger prism.




**3.** These cones are similar. Find $h$.




surface area = 576 $cm^2$ surface area = 16 $cm^2$

**4.** A factory makes two footballs and they charge a fixed price *per square metre* of leather that is used to cover the football. If they charge \$12 for the football of radius 15 cm, how much do they charge for a football of radius 12 cm?

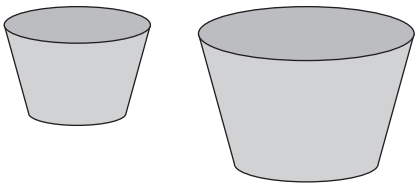
**5.** Two triangles are similar. The area of the larger triangle is 6 $m^2$ and its base is 5 m. How long (to the nearest cm) is the base of the smaller triangle if its area is 1 $m^2$?

**6.** The cost of similar bottles of milk is proportional to the *volume*. A bottle which has a radius of 36 mm costs 75c.

**a** What is the price (to the nearest cent) of the bottle with a radius of 45 mm?

**b** What is the radius (to 3 s.f.) of the bottle which costs \$1?

**7.** These two containers are similar. The ratio of their diameters is 3 : 7. Find the capacity of the smaller container if the larger container has a capacity of 34 litres (give your answer to 3 s.f.)



**8.** A shop sells bars of soap in various sizes, all of which are similar to each other. The shop charges the same amount per $cm^3$ of soap in each bar. If the bar which is 5 cm long costs 80c then what is the price (to the nearest cent) of the bar which is 8 cm long?