

# Lesson 1: A further problem

## Resource 1.3

### Optional problem or homework

You will need the set of cards on the next page to use as clues. You might like to cut up the cards to help you select and organise the clues that you will use.

The meditation area has been flooded to a depth of 1.5 cm.

It looks like the New Age hippies may need to swap their yoga mats for inflatables!

How will you remove the water from the meditation area?

This time it might not be as simple as you imagine!

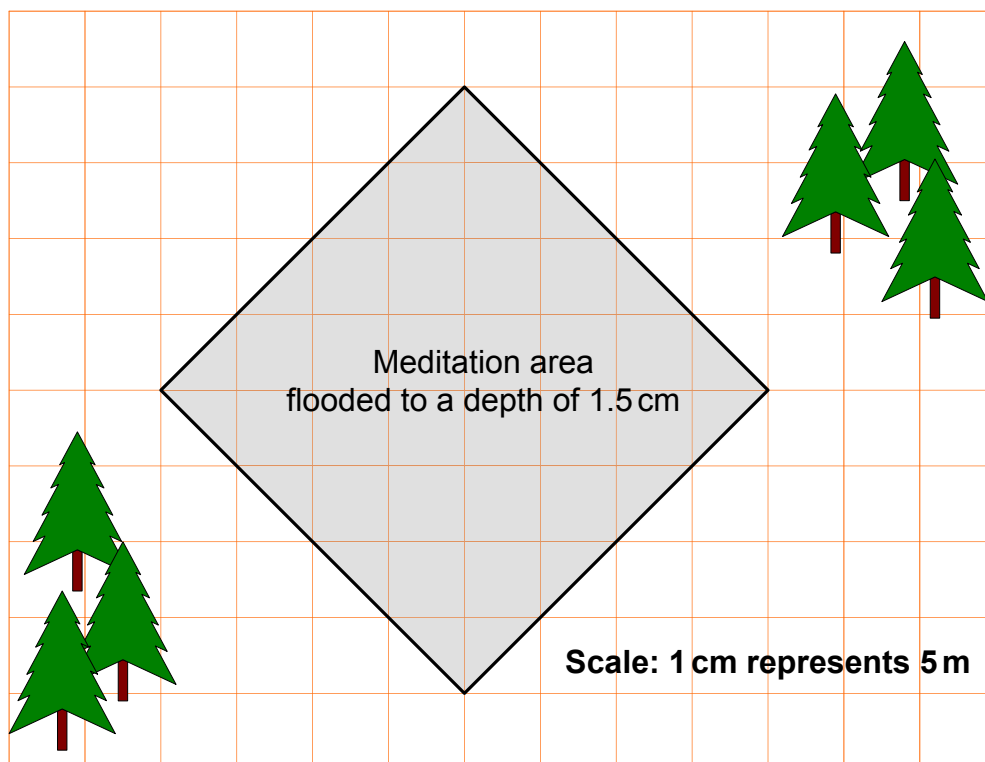
You can choose whether to use the suction truck or the helicopter.

Use the clues on the cards to help you decide.

When you have chosen the method you would use to dry out the area, explain how you came to that decision.

Here is a plan of the meditation area.

**1 centimetre represents 5 metres.**



### Resource 1.3 [continued]

If you wish, cut out a set of these cards to help you work out how to dry out the meditation area.



The site to empty the truck is a 5 minute drive away.	The river is 2 miles away.	The pump used to fill the helicopter's tank pumps $0.9 \text{ m}^3$ per minute.
The maximum load that the truck can carry is $9 \text{ m}^3$ .	The suction truck can pump out $1 \text{ m}^3$ every 3 minutes.	The site to dump the water is a 3 minute flight away.
The helicopter can lift away $3.6 \text{ m}^3$ of water in its tank.	It will take half an hour to unblock the drain pipe that leads to the river.	It takes 2 minutes to empty the truck.
It takes 5 minutes to empty the tank.	The helicopter's rotor blades are 9 metres long.	The average speed of the truck is 5 miles per hour.

