1 Saffron wants to work out an estimate for the total number of fish in a lake.

On Friday, Saffron catches 180 fish from the lake.
She puts a tag on each of these fish and puts them back into the lake.

On Saturday, Saffron catches 305 fish from the same lake.
She finds that 45 of the 305 fish are tagged.

Work out an estimate for the total number of fish in the lake.

let x be the total number of fish in the lake.

$\frac{180}{x} = \frac{45}{305}$ (1)

$\therefore x = \frac{180 \times 305}{45}$ (1) $= 1220$ fish (1)

1220

(Total for Question 1 is 3 marks)