Problem of the Week

Problem B

Sh-Rinking

Over the summer, Randy and Sarah have built the base for a rectangular outdoor skating rink which is 25 m by 10 m, surrounded by boards. Now it's winter, and time to make the rink!

a) How many litres of water will they need to fill the rink to a depth of 10 cm, assuming the ground is level?

b) To resurface the rink, their Dad gets out his 4-wheeler and blade and scrapes off 3 mm of ice. What is the volume of ice removed?

EXTENSION: In Science class, they learned that water expands by 9% when it freezes. How much less water would be needed so that the ice will still be 10 cm deep? (One way to find 9% of a number is to multiply the number by 9 and divide the product by 100.)