

**Exercise 1**Calc. : X

A machine fills bottles with a contact lens cleaning product.

From a day's production, a bottle is taken at random.

Let  $V$  be the random variable which, for each bottle, represents the volume of the product in ml.

We assume that  $V$  follows the normal distribution with mean  $\mu = 250$  ml and standard deviation  $\sigma = 16$  ml.

**Determine** the probability that the selected bottle contains between 218 ml and 266 ml of the cleaning product. Illustrate your answer with a sketch of the normal distribution curve.

5 marks