3 Pia runs 2 km every day and her times in minutes are normally distributed with mean 10.1 and standard deviation 1.3.

(a) Find the probability that on a randomly chosen day Pia takes longer than 11.3 minutes to run 2 km. [3]

....

....

....

....

....

....

....

....

....

....

....

....

....

(b) On 75% of days, Pia takes longer than t minutes to run 2 km. Find the value of t. [3]

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

(c) On how many days in a period of 90 days would you expect Pia to take between 8.9 and 11.3 minutes to run 2 km? [3]

....

....

....

....

....

....

....

....

....

....

....

....

....