

- Josie aims to catch a bus which departs at a fixed time every day. Josie arrives at the bus stop T minutes before the bus departs, where $T \sim N(5.3, 2.1^2)$.

(i) Find the probability that Josie has to wait longer than 6 minutes at the bus stop. [3]

[illegible]

On 5% of days Josie has to wait longer than x minutes at the bus stop.

(ii) Find the value of x . [3]

[illegible]

(iii) Find the probability that Josie waits longer than x minutes on fewer than 3 days in 10 days. [3]

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(iv) Find the probability that Josie misses the bus. [3]

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