

- 7 The shortest time recorded by an athlete in a 400 m race is called their personal best (PB). The PBs of the athletes in a large athletics club are normally distributed with mean 49.2 seconds and standard deviation 2.8 seconds.

- (i) Find the probability that a randomly chosen athlete from this club has a PB between 46 and 53 seconds. [4]

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- (ii) It is found that 92% of athletes from this club have PBs of more than t seconds. Find the value of t . [3]

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