

WARM-UP QUESTIONS: STATISTICS

1.

Find $P(X < 6)$ if $X \sim B(20, 0.3)$

2.

Stella is going to visit her aunt in Naples.

The probability that she has a vegetarian meal on her outward flight is 0.4

The probability that she has a vegetarian meal on her return flight is 0.3, independently of whether or not she has a vegetarian meal on her outward flight

Find the following

- the probability that she has a vegetarian meal on her outward flight but not on her return flight
 - the probability that she has a vegetarian meal on at least one of the two flights
 - given that she has a vegetarian meal on at least one flight, find the probability that she has a vegetarian meal on both flights
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3.

Lucas is a member of an athletics club

The time he takes to run a 1500 metres race is normally distributed with a mean of 243 seconds

Given that his time is over 250 seconds in 10% of his races, calculate the standard deviation of his times