

Answer for Question #71979

Probability of a boy's birth

$$p = 51.3\% = 0.513 \quad \Rightarrow \quad q = 1 - p = 0.487$$

Under the Bernoulli formula, the probability that among the 5 newborns will be exactly 3 boys is

$$P_5(3) = \binom{5}{3} p^3 q^2 = \frac{5!}{3! \cdot 2!} \cdot 0.513^3 \cdot 0.487^2 = 0.3202 = 32.02\%$$