Probability

The complementary result

QUESTION **1**   Complete:

a $P(\tilde{A})$ means the probability that A will _____

b $P(\tilde{A}) = 1 -$ _____

QUESTION **2**   Use the complementary result to find the required probability.

a   The probability that the ball lands on red on a roulette wheel is $\dfrac{18}{37}$. Find the probability that the ball does not land on red.

_____

_____

b   The probability of rain falling on a particular day is $\dfrac{9}{20}$. What is the probability that rain will not fall on that day?

_____

_____

c   The probability of winning a particular lottery with just one ticket is $\dfrac{1}{100\ 000}$. What is the probability that if you buy one ticket in that lottery you will not win?

_____

_____

d   The probability that a bus will arrive early or on time is 87%. What is the probability that the bus will run late?

_____

_____

e   The probability of a baby being born with a particular birth defect is 0.01%. What is the probability that a baby will not be born with that defect?

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_____

f   The thirty students in a class were surveyed and it was found that 12 had seen a particular movie. If a student is selected at random from the class what is the probability that she or he has not seen the movie?

_____

_____

g   Of 144 cows in a dairy herd 30 had calved in the last two months. What is the probability that a cow selected at random from that herd had not calved during the last two months?

_____

_____

h   A survey of 250 families found that 185 had at least one computer. If a family is chosen at random from this group, what is the probability that it does not have a computer?

_____

_____

Page 179 1 a not occur b $P(A)$ 2 a $\dfrac{19}{37}$ b $\dfrac{11}{20}$ c $\dfrac{99999}{100000}$ d 13% e 99.99% f $\dfrac{3}{5}$ g $\dfrac{19}{24}$ h $\dfrac{13}{50}$ **179**