Mathematics Grade 9

Name: _____   No. ____   G.9/____

Probability: Probability That An Event Does Not Happen

$$P(A \text{ does not happen}) = 1 - P(A \text{ does happen})$$

1. A card is drawn at random from an ordinary pack of playing cards. What is the probability that it is not three?

Solution $P(a\ three) = \dfrac{number\ of\ choices\ that\ are\ threes}{total\ number\ of\ possible\ choices} = - = -$

$P(\text{not a three}) = 1 - -$

$$= - - - = - = 92.31\%$$

Answer: $- = 92.31\%$

3. A number is chosen at random from the first 20 natural numbers. What is the probability that it is not exactly divisible by 5?

$$P(\text{it is divisible by } 5) = \frac{\text{number of choices that are exactly divisible by } 5}{\text{total number of possible choices}}$$

$$P(\text{it is divisible by } 5) = - = -$$

$$P(\text{not divisible by } 5) = 1 - -$$

$$= - - -$$

$$= - = 80\%$$

Answer: $- = 80\%$