1.3 Interpret Information About Probability

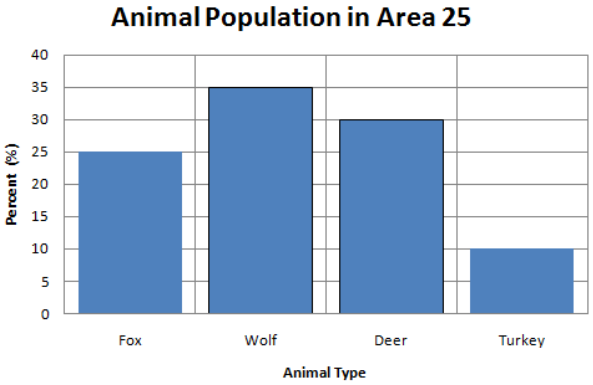
Example 1

A survey of animal populations in Area 25 resulted in the following data:

a) What is the percentage of each type of animal?

fox 25% wolf 35%

deer 30% turkey 10%



b) If 1200 animals were counted in total, how many were deer?

$1200(0.3)$

$= 360$

c) Assuming that the percentage of animals in another area is the same, and there are 45 turkeys, how many foxes would you expect?

$x(0.1) = 45$

$x = \frac{45}{0.1}$

$x = 450$

total #

Foxes

$450(0.25)$

$= 112.5$

$\doteq 113$

Example 2

In a hockey practice, Hammond had 96 shots on net. He made 87 saves.

a) What percent of shots went in?

$\frac{\#\text{shots in}}{\text{total \#}} \Rightarrow \frac{87}{96} = 0.906 \doteq 91\%$

#saved

$\therefore$ 9% went in.

b) If there are 55 shots on net in the next warm up, how many would you expect to go in?

$55(0.09) = 4.95$

$\doteq 5$

c) If there are 37 shots on net in the next game, how many would you expect to get in?

$37(0.09) = 3.\overline{33}$

$\doteq 3$

thinking...

Why might the information about the practice not be useful for predicting what happens in a game?

Example 3

The wolves soccer team has a record of 6 wins, 3 losses and 1 tie.
A win is worth 2 points, a loss is 0 points and a tie is 1 point.

a) Determine how many points the team has.

$6 \times 2 + 3 \times 0 + 1 \times 1$

$= 12 + 1$

$= 13$ $\therefore$ 13 points

b) If the team played ~~20~~ 23 games, how many would you expect them to lose?

$\%_{loss} = \frac{\#losses}{total}$ $\%_{loss} = \frac{3}{10}$ $= 0.30$

for 23 games?

$23(0.3) \div 6.9$

$\div 7$

c) If the team played ~~20~~ 23 games, how many points would you expect them to have?

Wins

$23(0.6) \div 14$

Ties

$23(0.1) \div 2$

Points

$14 \times 2 + 2 \times 1$

$= 30$ points

Homework
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