

2.3 Interpret Information About Probability

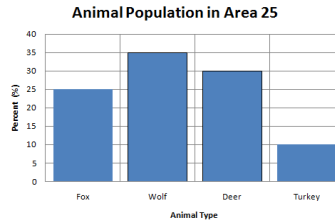
Example 1

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% deer 30%

wolf 35% turkey 10%



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

30% of 1200  $\Rightarrow 1200(0.30)$   
 $= 360$   $\therefore 360$  deer

c) Assuming that a different area had the same percentage of animals, and here there are 45 turkeys, how many foxes would you expect?

45 is 10%  
 $\text{total} = \frac{45}{0.10}$   
 $= 450$

foxes  
 25% of 450  
 $= 450(0.25)$   
 $= 112.5$   
 $\therefore$  Roughly 112.5 foxes

Feb 18-12:22 PM

Example 2

In a free throw practice, Darren attempted 80 shots and made 52 baskets.

a) What percent of shots went in?

% success  $= \frac{52}{80}$   
 $= 0.65$   
 $= 65\%$



b) If he attempts 50 shots in the next practice, how many would you expect him to get in?

We would expect 65% of 50  $\Rightarrow 50(0.65)$   
 $= 32.5$

c) If he had 10 free throw attempts during a game, how many would you expect to get in?

I would expect LESS than the usual 65%

$\therefore$  Less than 6.5

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

Feb 18-12:35 PM

Example 3

The wolves soccer team has a record of 6 wins, 3 losses and 1 tie. 10 games!  
 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.

$$\left. \begin{array}{l} 6 \text{ wins} \times 2 \text{ pts} = 12 \\ 1 \text{ tie} \times 1 \text{ pt} = 1 \end{array} \right\} 13 \text{ points}$$



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

$$\begin{array}{l} \% \text{ loss} = \frac{3}{10} \\ \quad = 30\% \end{array} \quad \begin{array}{l} 30\% \text{ of } 20? \\ = 20(0.30) \\ = 6 \end{array}$$

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

$$\text{Expect } \left. \begin{array}{l} 12 \text{ wins} \times 2 \text{ pts} = 24 \\ 2 \text{ ties} \times 1 \text{ pt} = 2 \end{array} \right\} 26 \text{ points}$$

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Extra Example

Out of a given population,

Fox 25%

Deer 10%

Assuming there were 32 foxes,  
 how many deer are there?

$$\begin{aligned} \text{Total} &= \frac{32}{0.25} \\ &= 128 \end{aligned}$$

$$\begin{aligned} \% \text{ Deer} &\Rightarrow 10\% \text{ of } 128 \\ &= 128(0.10) \\ &= 12.8 \end{aligned}$$

Apr 10-10:05 AM

**Homework**  
**page 89 #1-4,6,7,9ab**

By Tuesday, should be able to do p.94 #1-11

Feb 18-12:23 PM