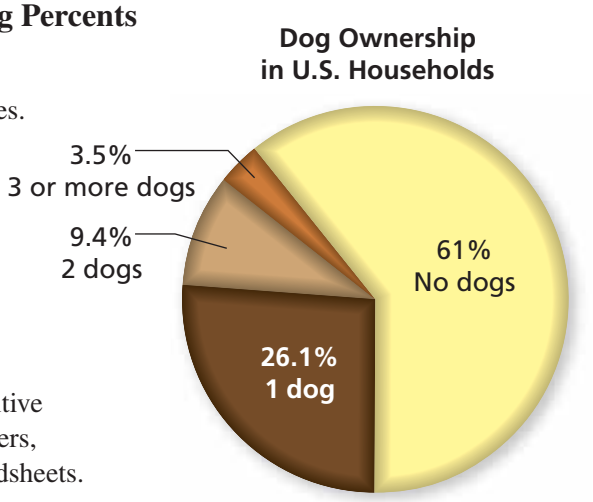
EXAMPLE 2 Finding Percents

There are about 117 million households in the United States. Use the circle graph (also called a pie chart or pie graph) to estimate the number of pet dogs in the United States.



SOLUTION

Problems like this, with repetitive steps and sums of large numbers, lend themselves well to spreadsheets.

DATA

117,000,000 × 0.094 × 2 = 21,996,000

	A	B	C	D	
1		Number			
2	Households	of Dogs	Percent	Dogs	
3	117,000,000	0	61.0%	0	
4	117,000,000	1	26.1%	30,537,000	
5	117,000,000	2	9.4%	21,996,000	
6	117,000,000	5	3.5%	20,475,000	
7			100.0%	73,008,000	
8					
9					

Total percent

Total number of dogs

Notice that we assumed that households with 3 or more dogs have an average of 5 dogs. This assumption affects the final answer. With this assumption and with the context of the problem, you cannot assume much accuracy in the answer. Perhaps an answer of "about 70 million dogs" is reasonable.

Checkpoint

Help at Math.andYOU.com

There are about 117 million households in the United States. Thirty-three percent of the households own at least one cat. On average, these households have 2.45 cats. Estimate the number of pet cats in the United States.