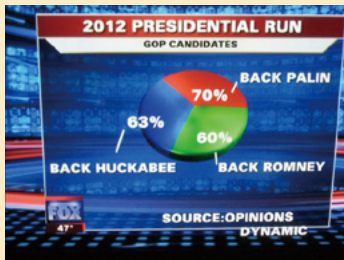
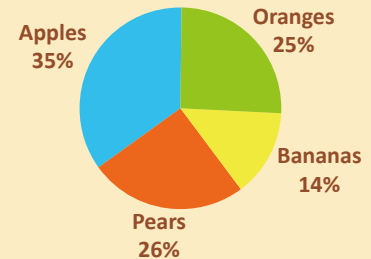


Pie Charts and Percentages

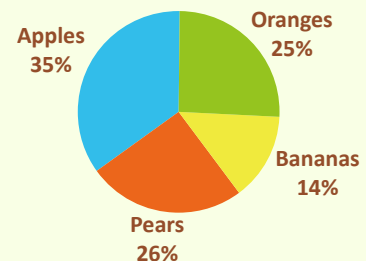
A **pie chart** (or a **circle graph**) is a circular chart divided into parts to illustrate proportions. It is a good way of showing the proportion (or fraction) of the data that is in each category. The pie chart on the right shows the proportion of the students being surveyed and their favorite fruits. For example, 25% of them like oranges while 14% like bananas.



Percent means "parts of 100". It is a way of expressing a number as a fraction of 100. A good indicator of something being wrong is when the percentages do not sum up to 100%, like in the infamous Fox News pie chart, as shown on the left.

Example 1

Angela surveyed students in her school about their favorite fruit. The survey results are represented in the following pie chart. Study the pie chart and answer the following question. If 200 students responded to the survey, how many students chose oranges as their favorite fruit?



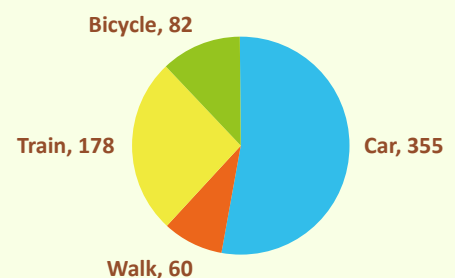
Explanation

$$200 \times 25\% = 50.$$

There are 50 students that chose oranges as their favorite.

Example 2

Town center sent out a survey to the residents about how they go to work. The pie chart below shows the number of responders on each category. Study the pie chart and answer the following question. What is the combined percentage of people walking and riding a bike?



Explanation

We need to calculate the total number of responders: $178 + 355 + 60 + 82 = 675$

People who **walk or ride a bike**: $60 + 82 = 142$

Therefore the combined percentage of people walking and riding a bike is:

$142 \div 675 \times 100\% \approx 21\%$