

10-5 Problem-Solving Practice - PreAlgebra

Using Sampling to Predict

<p>1. The managing group of a local shopping mall surveyed their customers to determine which stores bring in the most patrons. They surveyed every 15th person to enter all entrances to the mall. What type of sample did the group use?</p>	<p>2. A candy company inspects a sampling of its production by checking the first 10 and the last 10 candies produced each hour. Identify this sample as biased or unbiased. Explain.</p>										
<p>3. A survey of 50 randomly selected students showed that 38 students buy lunch at school and 12 students bring lunch from home each day. About how many of the school's 524 students buy lunch at school each day?</p>	<p>4. Johnson's Hardware randomly selects 125 of its customers and questions them to determine their overall customer satisfaction rating. The poll indicates 100 were completely satisfied, 15 were satisfied, and 10 were not satisfied at all. What percent of customers were either satisfied or completely satisfied? About how many of the 5000 customers were not satisfied at all?</p>										
<p>5. A local newspaper conducts a telephone survey before the upcoming mayoral election. Of the 185,000 registered voters, 500 are randomly chosen and asked, "If the election were held today, who would get your vote for mayor?" The results are shown in the table below.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #d3d3d3;"> <th style="padding: 5px;">Mayoral Candidate</th> <th style="padding: 5px;">Number of Polled Supporters</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Smith</td> <td style="padding: 5px;">140</td> </tr> <tr> <td style="padding: 5px;">Wong</td> <td style="padding: 5px;">115</td> </tr> <tr> <td style="padding: 5px;">Sanchez</td> <td style="padding: 5px;">134</td> </tr> <tr> <td style="padding: 5px;">Blom</td> <td style="padding: 5px;">111</td> </tr> </tbody> </table> <p style="margin-top: 10px;">Is the sampling method valid? Explain.</p>	Mayoral Candidate	Number of Polled Supporters	Smith	140	Wong	115	Sanchez	134	Blom	111	<p>6. Refer to the table in Exercise 5. How many votes can Sanchez expect to receive in the election?</p>
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