Use and Misuse of Statistics

1) How is this ad for winter tires misleading?

2) The following pairs of graphs show the same data. Which of the graphs in each pair displays the data more accurately? Explain.

a) Canada's population by age according to the 2001 census

   i) Ages of Canadians, 2001 Census
   ii) Ages of Canadians, 2001 Census

   - 65 to 84: 20%
   - 55 to 64: 24%
   - 45 to 54: 24%
   - 35 to 44: 20%
   - 25 to 34: 15%
   - 15 to 24: 11%
   - 0 to 14: 6%
   - 95 and older: 1%

b) A company's profits over a 5-year period

   i) Company Profits
   ii) Company Profits

   - Annual Profit (millions)
   - Year

   - Annual Profit (millions)
   - Year

   - Days of Freezing Temps
   - Days of Freezing Temps

   - Days of Freezing Temps
   - Days of Freezing Temps
3) How is this bar graph about house prices misleading the reader?

4) What is wrong with this circle graph? How is it misleading?

5) What is wrong with this circle graph? What would be a better choice of graph to display this data?

6) What is misleading about this line graph? How could this information be displayed better?