

AP STATS
Homework 1.1 Part A

Name Key
Date _____ Hour _____

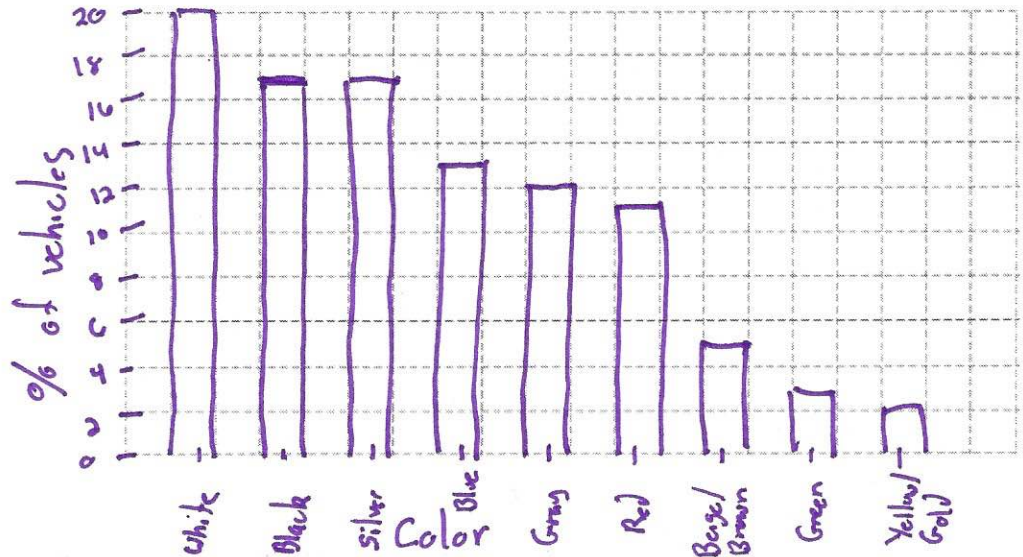
9) Cool car colors The most popular colors for cars and light trucks change over time. Silver passed green in 2000 to become the most popular color worldwide, then gave way to shades of white in 2007. Here is the distribution of colors for vehicles sold in North America in 2008.

a) What percent of vehicles had colors other than those listed

0%

b) Display these data in a bar graph. Be sure to label your axes and title your graph.

Color	Percent of vehicles
White	20
Black	17
Silver	17
Blue	13
Gray	12
Red	11
Beige/brown	5
Green	3
Yellow/gold	2



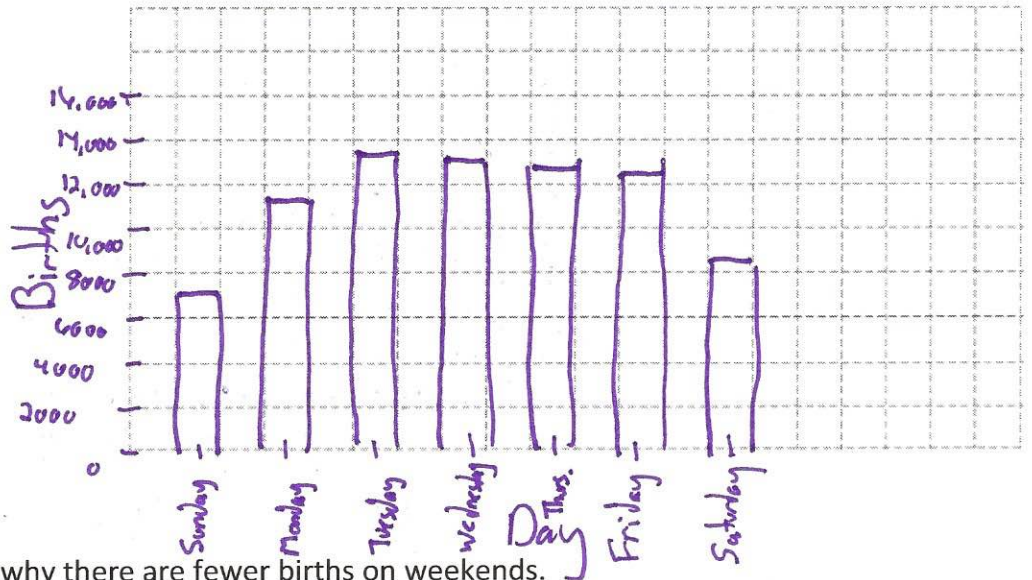
c) Would it be appropriate to make a pie chart of these data? Explain.

Yes. We have all possible colors listed.
(Percents add to 100)

11) Birthdays Births are not evenly distributed across the days of the week. Here are the average numbers of

(a) Present these data in a well-labeled bar graph. Would it also be correct to make a pie chart?

Day	Births
Sunday	7,374
Monday	11,704
Tuesday	13,169
Wednesday	13,038
Thursday	13,013
Friday	12,664
Saturday	8,459

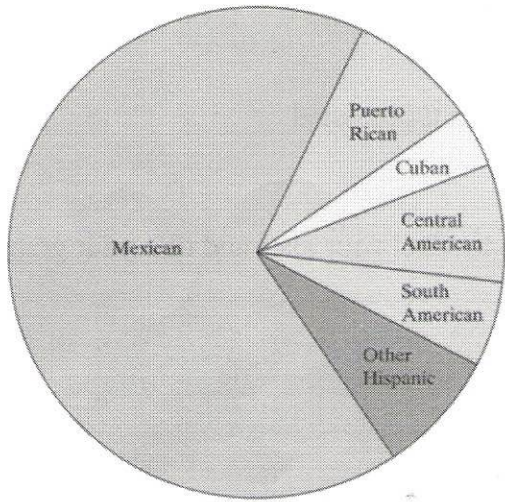


(b) Suggest some possible reasons why there are fewer births on weekends.

C-sections scheduled for weekdays

13) **Hispanic origins** Below is a pie chart prepared by the Census Bureau to show the origin of the more than 43 million Hispanics in the United States in 2006.¹² About what percent of Hispanics are Mexican? Puerto Rican?

Percent Distribution of Hispanics by Type: 2006



Mexican: $\approx 63\%$ or 64% (almost $\frac{2}{3}$)

Puerto Rican: $\approx 10\%$

Comment: You see that it is hard to determine numbers from a pie chart. Bar graphs are much easier to use. (The Census Bureau did include the percents in its pie chart.)

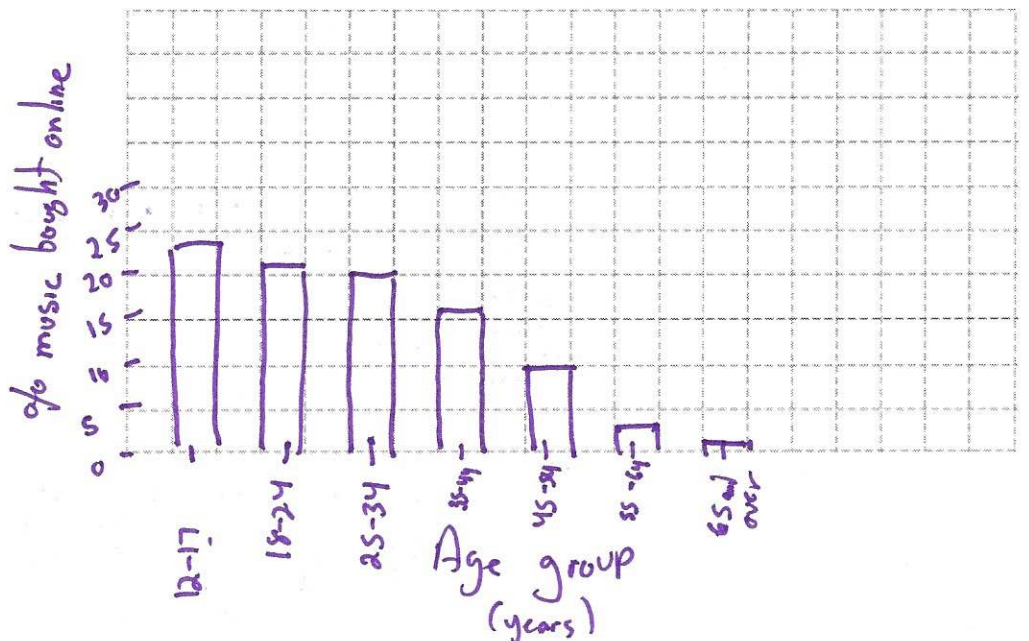
15) **Buying music online** Young people are more likely than older folk to buy music online. Here are the percents of people in several age groups who bought music online in 2006.

Age group	Bought music online
12 to 17 years	24%
18 to 24 years	21%
25 to 34 years	20%
35 to 44 years	16%
45 to 54 years	10%
55 to 64 years	3%
65 years and over	1%

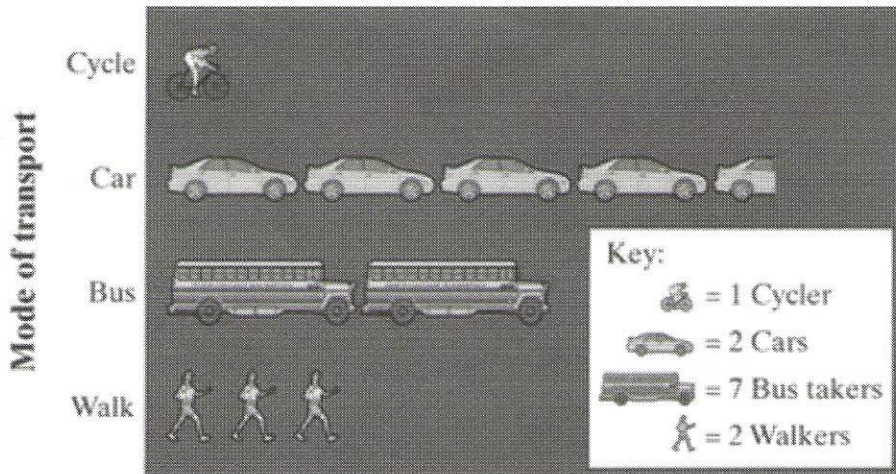
(a) Explain why it is *not* correct to use a pie chart to display these data.

The given percents represent fractions of different age groups, not parts of a single whole.

(b) Make a bar graph of the data. Be sure to label your axes and title your graph.



17) Going to school Students in a high school statistics class were given data about the primary method of transportation to school for a group of 30 students. They produced the pictograph shown.



(a) How is this graph misleading?

Pictures should be proportional to # of students they represent.
 (Both car and walker represent 2 students, but car is much larger in size than the "walker on the graph")

(b) Make a new graph that isn't misleading

