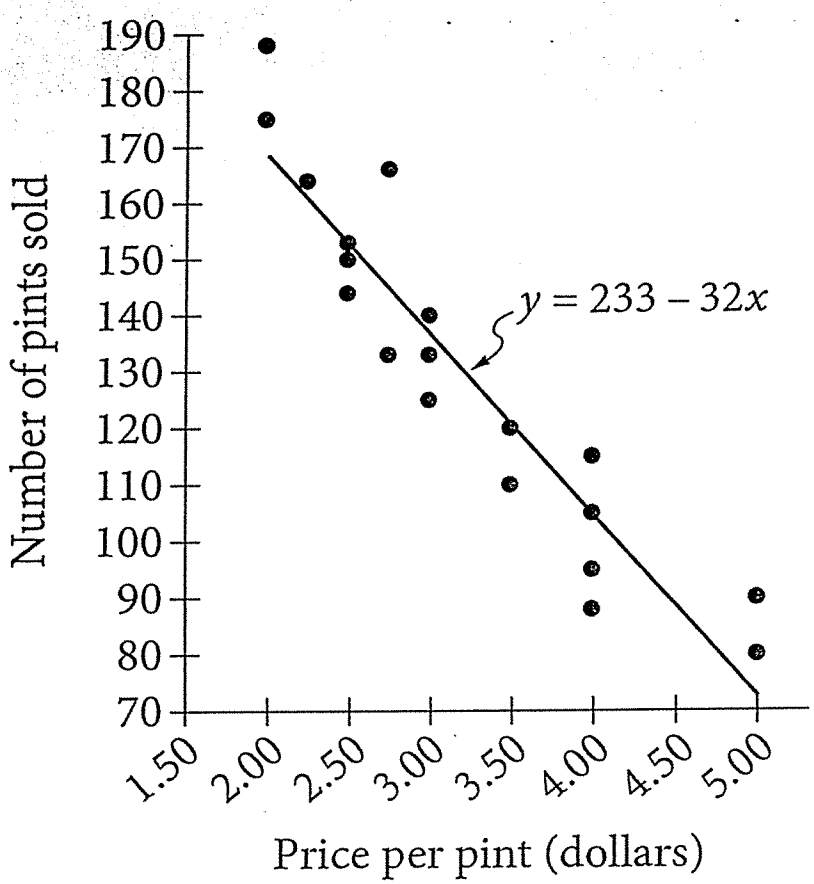
Question 1



A grocery store sells pints of raspberries and sets the price per pint each week. The scatterplot above shows the price and the number of pints of raspberries sold for 19 weeks, along with a line of best fit for the data and an equation for the line of best fit.

A. According to the line of best fit, how many pints of raspberries would the grocery store be predicted to sell in a week when the price of raspberries is $4.50 per pint?

B. For how many of the 19 weeks shown was the number of pints of raspberries sold greater than the number predicted by the line of best fit?

Question 2

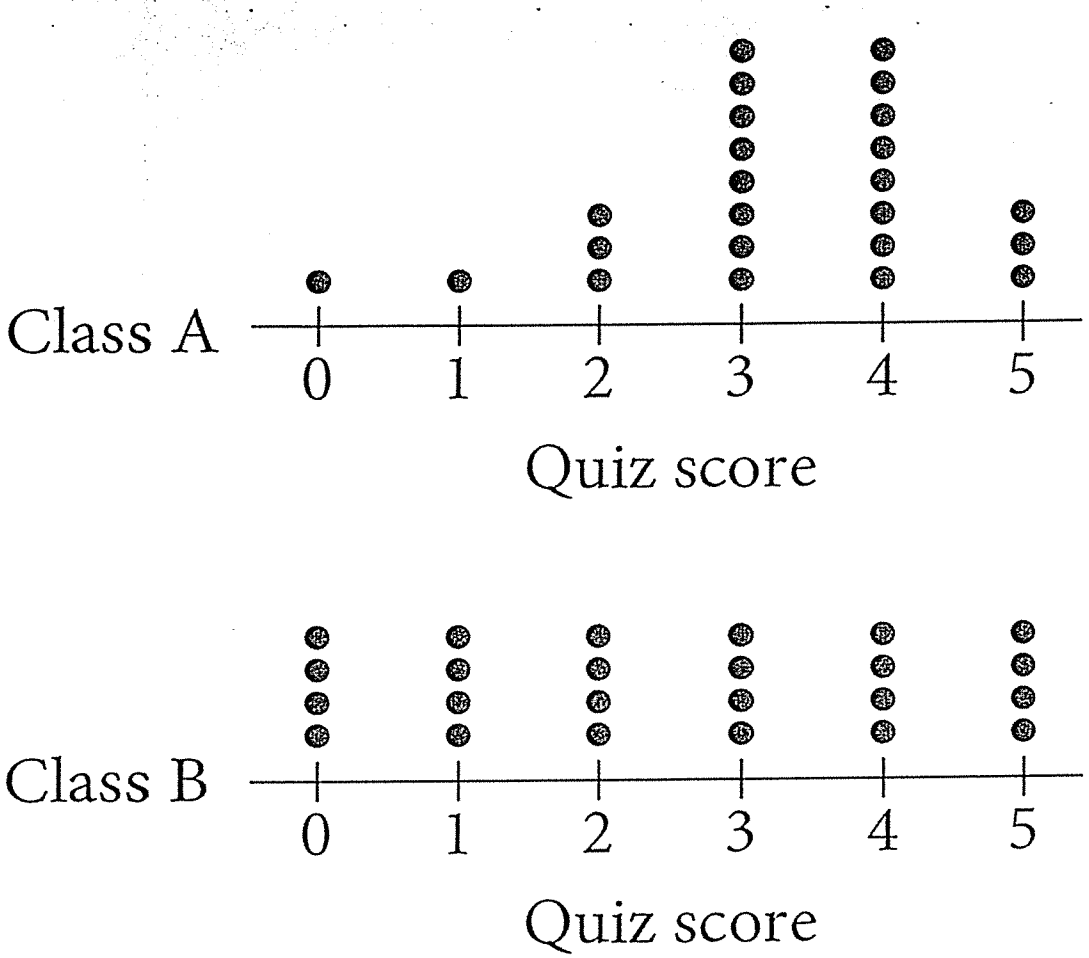
A store is deciding whether to install a new security system to prevent shoplifting. Based on store records, the security manager of the store estimates that 10,000 customers enter the store each week, 24 of whom will attempt to shoplift. Based on data provided from other users of the security system, the manager estimates the results of the new security system in detecting shoplifters would be as shown in the table below.

	Alarm sounds	Alarm does not sound	Total
Customer attempts to shoplift	21	3	24
Customer does not attempt to shoplift	35	9,941	9,976
Total	56	9,944	10,000

A. According to the manager's estimates, if the alarm sounds for a customer, what is the probability that the customer did *not* attempt to shoplift?

B. According to the manager's estimates, if the customer attempts to shoplift, what is the probability that the alarm does *not* sound?

Question 3



The dot plots above show the distributions of scores on a current events quiz for two classes of 24 students.

A. WITHOUT doing any calculations, compare the standard deviations of each distribution.

B. Describe the shape of each distribution. Then decide what measurement you would use to describe "typical value" and which measurement you would use to describe the spread of each distribution.

Question 4

Number of States with 10 or More Electoral Votes in 2008

Electoral votes	Frequency
10	4
11	4
12	1
13	1
15	3
17	1
20	1
21	2
27	1
31	1
34	1
55	1

In 2008, there were 21 states with 10 or more electoral votes, as shown in the table above. Based on the table, what was the median number of electoral votes for the 21 states?

How would you describe the shape of this distribution? (You should be able to make this decision without plotting!)

Question 5

a) Which of Josh's statements is false for the following set of values?

10 17 12 18 15 18 14 20 45 11

A The mean and mode are both 18.
B The number 45 is an outlier.
C The median is one of the numbers in the set.
D The interquartile range is 6.

b) The mean of the set $\{3, 5, x, 8\}$ is 6. The mode is ?

Question 6

Age of the first fourteen Indian Prime Ministers upon taking office

Prime Minister	Age (years)	Prime Minister	Age (years)
Jawaharlal Nehru	57	V. P. Singh	58
Lal Bahadur Shastri	59	Chandra Shekhar	63
Gulzarilal Nanda	65	P. V. Narasimha Rao	69
Indira Gandhi	48	Atal Bihari Vajpayee	71
Morarji Desai	81	H. D. Deve Gowda	63
Charan Singh	76	I. K. Gujral	77
Rajiv Gandhi	40	Manmohan Singh	71

The table above shows the ages of the first 14 Indian prime ministers when they began terms in office. According to the table, what is the mean age, in years, of these prime ministers at the beginning of their terms? (Round your answer to the nearest tenth.)

What is the standard deviation of the ages of prime ministers? What does this tell you about the data?

Question 7

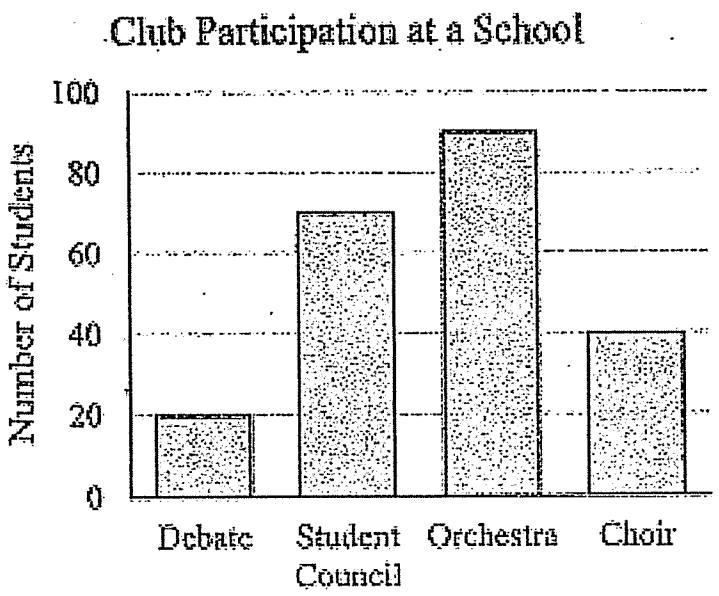
Ages of the First 12 United States Presidents at the Beginning of Their Terms in Office

President	Age (years)	President	Age (years)
Washington	57	Jackson	62
Adams	62	Van Buren	55
Jefferson	58	Harrison	68
Madison	58	Tyler	51
Monroe	59	Polk	50
Adams	58	Taylor	65

The table above lists the ages of the first 12 United States presidents when they began their terms in office. According to the table, what was the mean age, in years, of these presidents at the beginning of their terms? (Round your answer to the nearest tenth.)

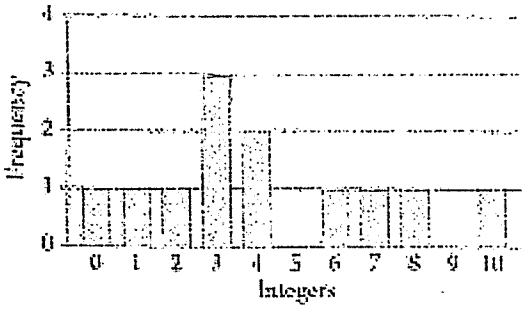
Question 8

a)



The graph above shows the student participation for 4 school clubs. Each student is allowed to participate in only one club. If the school has 250 students, how many students are not in a club?

b)



The graph above shows the frequency distribution of a list of randomly generated integers between 0 and 10. What is the mean of the list of numbers?