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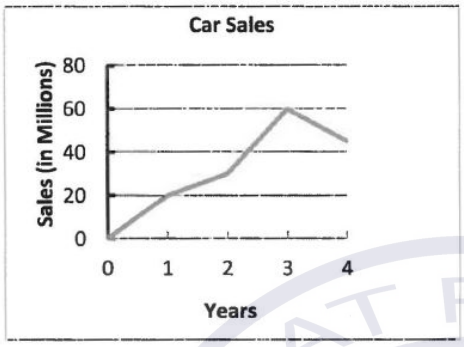
Assignment : ***Data Analysis***

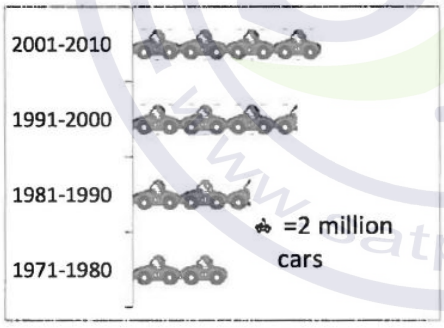
Easy

1. From the graph below, John sold how many more cars in year 3 than the sum of cars sold in years 1 and 2?



a) 10
b) 15
c) 20
d) 25

2. The pictogram below shows the number of car sales in Company G over the years from 1971 to 2010. How many cars (in millions) were sold from 1971 to 2000?



a) 8
b) 10
c) 12
d) 16

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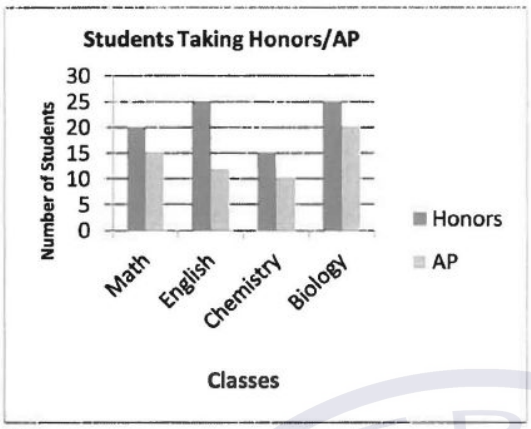
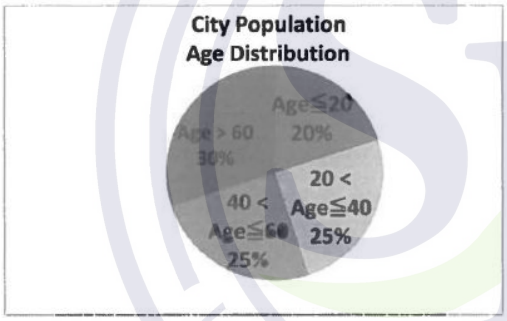
3. According to the graph below, how many students are taking honors classes altogether?



a) 75
b) 80
c) 85
d) 90



4. Town A has a population of 25,000 and the chart above shows their age distribution. How many people are 40 years or younger?
   a) 5000
   b) 8000
   c) 10,000
   d) 11,250

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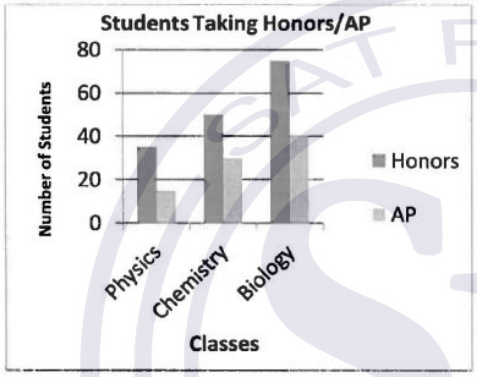
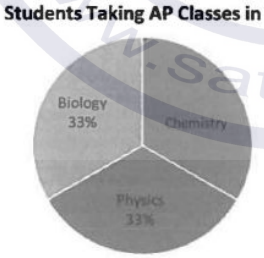
5. What is the percent increase of sales from the third to the fourth year in the chart below?

a) 40%
b) 55%
c) 65%
d) 67%

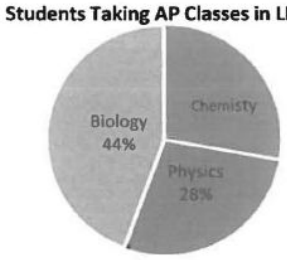


6. The bar graph above shows the distribution of students in each science class in Livingston High School last year. Which of the following pie graphs most accurately displays the breakdown AP classes taken at Livingston High School (provided each student only takes 1 AP)?

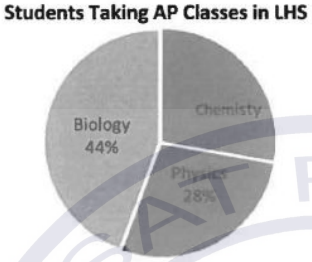
a)



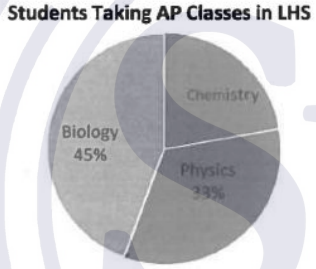
b)



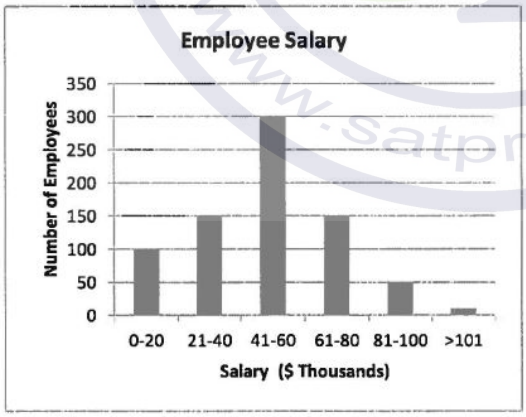
c)



d)



7. According to the graph below, how many employees have salary less than or equal to $40,000?

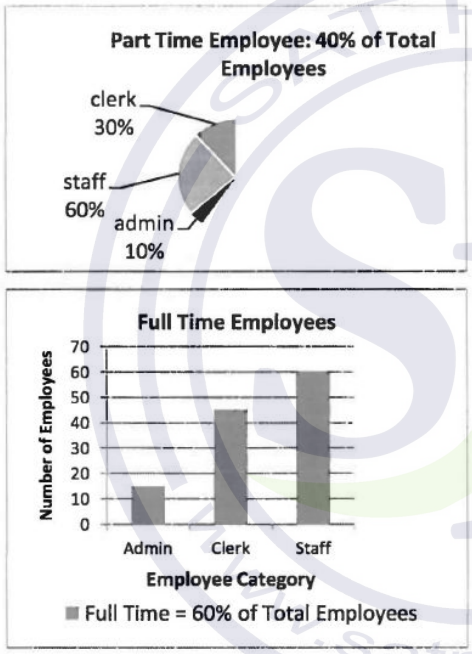


a) 100
b) 150
c) 250
d) 300

8. The chart below shows the results of a swimming race. If all the students started at the same time, who finished second?

Swimming Race Results	
Student	*Time (in seconds)*
Grant	*57.55*
Robert	*56.94*
Larry	*55.81*
Adam	*56.02*
Chris	*57.41*

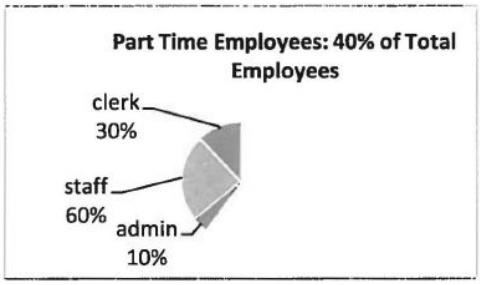
a) Grant
b) Robert
c) Larry
d) Adam

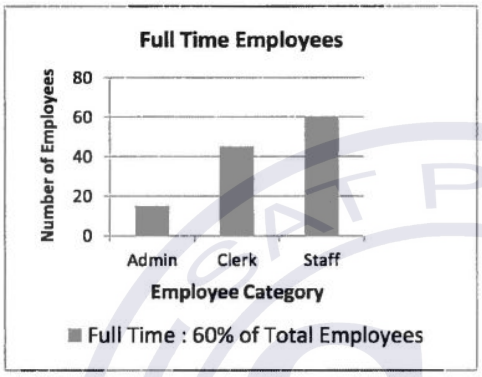


9. According to the graphs above, the total number of full-time employees is how many more than the total number of part time employees at Oak Town High School?

a) 20
b) 40
c) 50
d) 60

10. According to the graphs below, how many part-time staff members are at Oak Town High School?





a) 48
b) 50
c) 52
d) 54

11. Of the following, which is the closest approximation of the cost per ticket when one purchases a book of 6?

Bus Ticket Price	
Number of Bus Tickets	*Price*
1	*7.5*
Book of 6	*40*
Book of 12	*75*

a) $6.67
b) $6.70
c) $6.80
d) $6.90

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12. The pie graph above shows Ellen's family's monthly expenses and the proportion of each expense out of all of their expenditures. If the family's total expenses are $3000 per month, approximately how much do they pay on taxes per month?
    a) $500
    b) $600
    c) $700
    d) $750

Votes in Favor of Building a New Sewer System in Orange County		
Town	*Yes*	*Total Population*
A	*30%*	*25,000*
B	*60%*	*40,000*
C	*45%*	*15,000*
D	*40%*	*20,000*

13. The table above shows voting results of 5 towns for support of building a new sewer system in Orange County. What is the percent of total residents that voted "Yes" for building a new sewer system?
    a) 45%
    b) 46%
    c) 50%
    d) 52%

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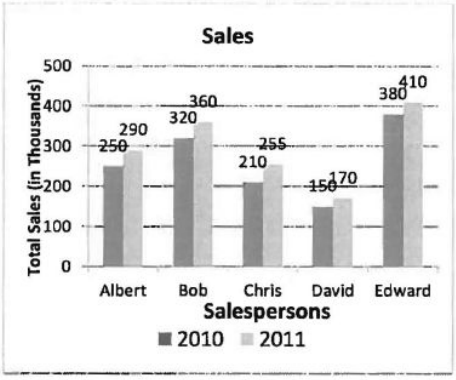
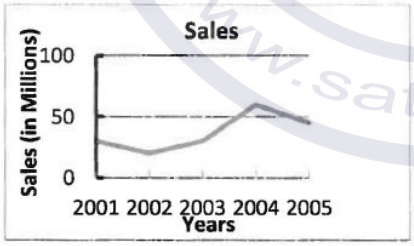


14. Which salesperson had the greatest increase in the number of units sold from 2010 to 2011 according to the graph above?
    a) Albert
    b) Bob
    c) David
    d) Chris

15. What would be the least amount of money needed to purchase exactly 21 tickets according the table below?

Bus Ticket Price	
Number of Bus Tickets	*Price*
1	*7.5*
Book of 6	*40*
Book of 12	*75*

    a) $155
    b) $142.5
    c) $137.5
    d) $135



16. Which of the following is closest to the decrease in sales in millions between 2004 and 2005 according to the graph above?
    a) 10
    b) 12
    c) 15
    d) 20

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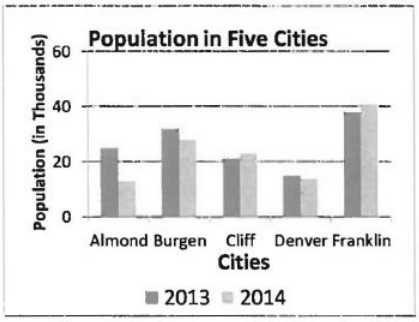
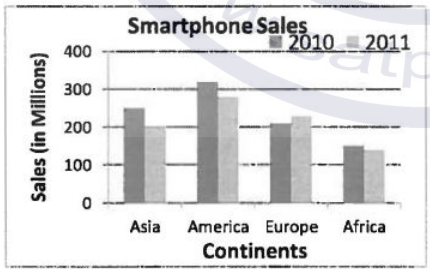
Questions 17 – 18 refer to the chart below:



17. Which of the following cities had a population in 2014 that was approximately 50% less than its population in 2013?
    a) Almond
    b) Burgen
    c) Cliff
    d) Denver

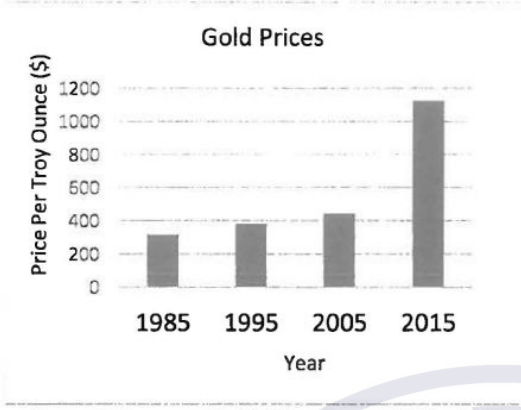
18. The total population in all five cities increased by approximately what percent from 2013 to 2014?
    a) 10%
    b) 9%
    c) -10%
    d) -9%

19. The following graph shows a certain brand of smartphone sales in four different continents. How many of the continents shown below had fewer sales in 2011 than 2010?



    a) 0
    b) 1
    c) 2
    d) 3

Medium



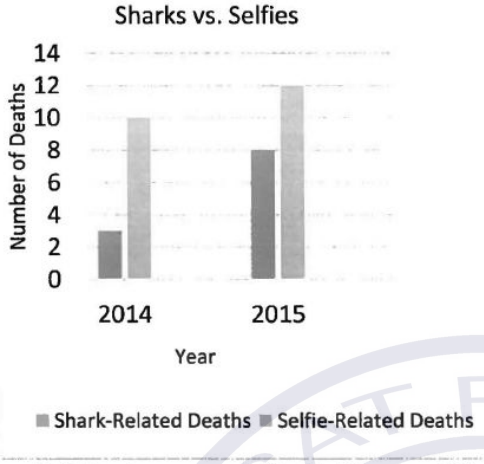
Annual Average Gold Price from 1985 to 2015 (U.S. dollars per troy ounce)

20. The figure above shows the change of the annual average gold price between 1985 and 2015, in U.S. dollars per troy ounce. A troy ounce is a traditional unit of gold weight. In 1985, a troy ounce of gold had an annual average price of around $317. Based on the information shown, which of the following conclusions is valid?
    a) A troy ounce of gold cost more in 1995 than in 2005.
    b) The price more than doubled between 2005 and 2015.
    c) The percent increase from 1985 to 2015 is more than 300%.
    d) The overall average gold price between 1985 and 2015 is around US $550.

21. According to the table below, auto parts with different grades can be used for different number of years before they must be replaced. How many years can parts with grade A last?

Grades of Auto Parts	
Grade	*Max Years of Operation*
D	*3 years*
C	*20% more than D*
B	*15 % more than C*
A	*10 % more than B*

Questions 22 – 23 refer to the following information:



News outlet *Reuters* reports that taking a selfie is actually a dangerous endeavor, and that many people have been injured or died while taking a selfie. The figure above shows that more people around the world have died by taking selfies than by shark attacks in the years of 2014 and 2015. There have been twelve recorded selfie deaths in 2015 compared to eight people dying from shark attacks. The most common selfie-related deaths have been due to falling or being hit by a moving vehicle.

22. What is the percent change of total deaths from 2014 to 2015?
    a) 50%
    b) 70%
    c) 100%
    d) 233%

23. What is the difference between the percent changes of shark-related deaths and selfie-related deaths from 2014 to 2015?
    a) 20%
    b) 147%
    c) 167%
    d) 187%

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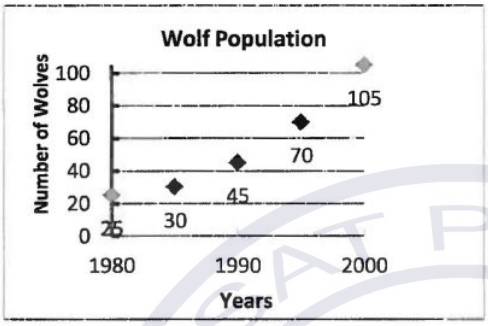
24. The scatter plot below shows the wolf population in a safari every 5 years. If w is the number of wolves present in the park and t is the number of years since the study began in 1980, which of the following equations best represents the wolf population in the safari?



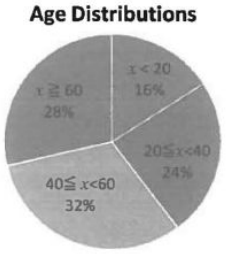
a) $w = 25 + t$
b) $w = 25 + 5t^2$
c) $w = 25 + 0.2t^2$
d) $w = (25)(0.2)^{(t/5)}$

25. In Old Bridge High School each class period is 1 hour and 20 minutes long, each break in between periods is 5 minutes long and lunch (between 2nd and 3rd period) is 45 minutes long. If 4th period is to end at 2:30, what time should the school day begin?
    a) 8:00
    b) 8:15
    c) 8:30
    d) 8:45

26. The table below, describing number of students who passed or failed the Algebra I final exam, is partially filled in. Based on the information in the table, how many females have failed?

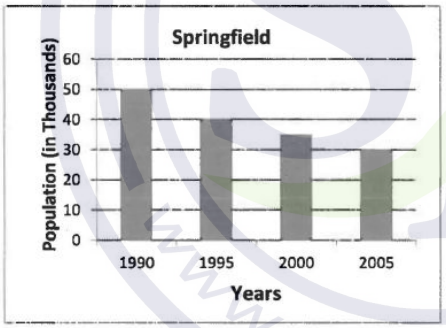
Algebra I Final Exam Results			
	Pass	*Fail*	*Total*
Male	*125*		
Female			*145*
Total	*230*		*305*

a) 35
b) 40
c) 45
d) 50



27. If there are 4180 residents ranging in age from 40 to 59 in Green Village County according to the graph above, approximately how many residents are under the age of 20?
    a) 2000
    b) 2100
    c) 2200
    d) 2300

28. The percent decrease from the 1995 population to the 2000 population was the same as the percent decrease from the 2005 population to the 2010 population. According to the graph below, what was the 2010 population in Springfield?



    a) 25,000
    b) 26,000
    c) 26,250
    d) 26,500

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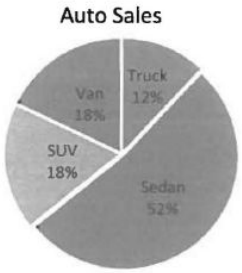


29. The pie graph above represents the automobiles that were sold by a dealer in 2010, according to their records. If the dealer sold 40 more Sedans than all others combined, how many automobiles did it sell altogether?
    a) 1,000
    b) 1,150
    c) 1,500
    d) 2,000

Hard

30. In a charity donation event, based on the chart below, how much money did women on the Red Team raise in this event?

Charity Donation Event			
	Blue Team	*Red Team*	*Total*
Men	*$4,500*		*$11,300*
Women			*$3,500*
Total		*$10,500*	

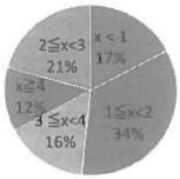
    a) $3,000
    b) $3,500
    c) $3,700
    d) $4,300

31. In a charity donation event, based on the chart below, how much money did women on the Red Team raise in this event?

Charity Donation Event			
	Blue Team	*Red Team*	*Total*
Men	*$4,500*		*$11,300*
Women			*$3,500*
Total		*$10,500*	

    a) $3,000
    b) $3,500
    c) $3,700
    d) $4,300

Number of Hours of TV Watched



32. The graph above shows breakdown of the average number of hours of TV watched per day. 1000 people were surveyed, and all but 120 people surveyed responded to the question. If x is the number of hours spent, about how many respondents watch TV for more than 3 hours a day?
    a) 200
    b) 220
    c) 250
    d) 280

33. The table below shows test scores for seven students. If the median score is 70, then the score for David could be any of the following EXCEPT?

Test Scores	
Student	*Scores*
Alan	*80*
Bill	*63*
Cindy	*57*
David	*X*
Eric	*98*
Frank	*74*
Gina	*70*

    a) 59
    b) 65
    c) 69
    d) 72

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34. The number of books that have been checked out of the town public library in a particular week was recorded in the table below. If the median number of books checked out for the whole week was 93, which of the following could have been the number of books checked out on Saturday and Sunday, respectively, of the same week?

Town Library Checkout Records	
Day of the Week	*Number of Books Checked Out*
Monday	*87*
Tuesday	*91*
Wednesday	*92*
Thursday	*93*
Friday	*96*

a) 88 and 92
b) 89 and91
c) 90 and 97
d) 94 and 97

35. The table below shows the number of students in Mr. Jang's class that are taking 1, 2, 3, or 4 AP classes. After a new student joined the class (not shown in the table), the average (arithmetic mean) number of AP classes per student became equal to the median. How many AP classes is the new student taking?

Students Taking AP Classes	
Number of APs	*Number of Students*
1	*6*
2	*4*
3	*5*
4	*4*

a) 2
b) 3
c) 4
d) 5

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