

Objective 9 - Page 1 of 6

A basketball player made 12 free throws in his last 36 attempts. How many free throws would the basketball player be expected to make in 78 attempts?

- F** 20
- G** 26
- H** 52
- J** 234

July '06 Obj 9 - # 2

Mr. Jenkins designed a true-false science exam. The ratio of true answers to false answers is 5:3. Which is closest to the percentage of true answers on Mr. Jenkins's science exam?

- A** 53%
- B** 60%
- C** 38%
- D** 63%

July '06 Obj 9 - # 35

A total of 550 students from the Fairfield High School junior class voted on their choice for their senior class gift to the school. The table below shows the results of the vote. Which graph best represents the results of the survey?

Senior Class Gift

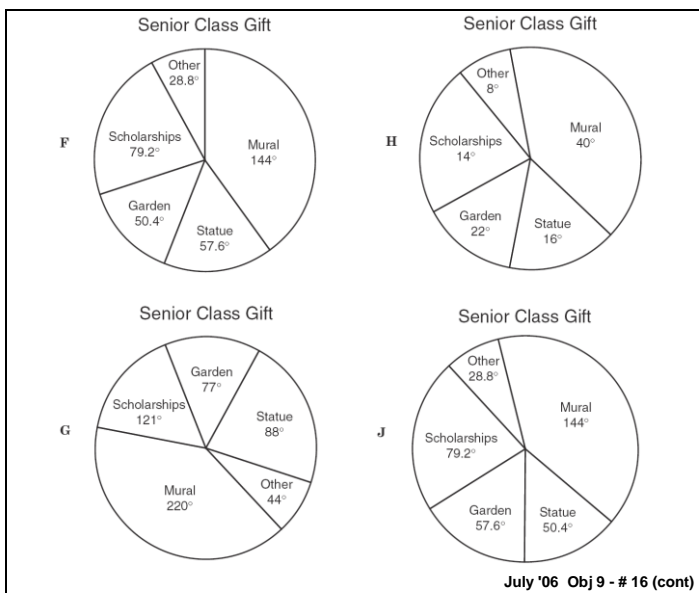
Type	Number of Votes
Mural	220
Statue	88
Garden	77
Scholarships	121
Other	44

July '06 Obj 9 - # 16

A salesman at a jewelry store earns a salary of \$295 per week plus a commission of 15% of his weekly sales. If the salesman earned \$936.30 in a week, what was the amount of his sales for the week?

- A** \$4275.34
- B** \$5947.07
- C** \$2115.93
- D** \$1371.75

July '06 Obj 9 - # 41



July '06 Obj 9 - # 16 (cont)

A physical education class had 20 students. The table below shows the students' grades and the number of days each student was absent. Which conclusion about the students in this class is true?

Grade Compared with Attendance

Grade	Number of Days Absent
A	0, 3, 2, 2, 1, 1, 4
Less than A	4, 5, 9, 7, 6, 3, 5, 3, 6, 5, 8, 7, 9

- A** Each student who earned a grade of A was absent fewer than 4 days.
- B** Each student who was absent fewer than 4 days earned a grade of A.
- C** Each student who was absent more than 2 days did not earn a grade of A.
- D** Each student who did not earn a grade of A was absent more than 2 days.

July '06 Obj 9 - # 49

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Amanda, Bonnie, Cindy, and Linda competed in a biathlon consisting of running and swimming events. The table below shows the number of seconds each of them took to complete the parts of the competition. The top rankings are awarded to the individuals with the fastest combined times. Based on the information given in the table, which event probably determined the outcome of the competition?

Name	Running (seconds)	Swimming (seconds)
Amanda	700	540
Bonnie	730	400
Cindy	720	460
Linda	750	330

Apr '06 Obj 9 - # 5

The Hawthorne Mustangs have won 4 games and lost 6 games this season. Based on these results, which is the best prediction of the number of games the Mustangs must play in order to win 6 games?

- F 8
- G 9
- H 12
- J 15

Apr '06 Obj 9 - # 34

- A Running, because the times vary more
- B Swimming, because the times vary more
- C Running, because the times are consistent
- D Swimming, because the times are consistent

Apr '06 Obj 9 - # 5 (cont)

The energy of a certain particle is 3.86 joules. If this particle loses 0.105 joule of energy every 30 seconds, what will its energy be after 8 minutes?

- F 2.18 joules
- G 1.68 joules
- H 3.02 joules
- J 2.29 joules

Apr '06 Obj 9 - # 42

Last Friday a used-car dealer had cars for sale for \$600, \$690, \$695, \$710, \$725, \$750, \$850, \$995, \$995, \$995, and \$1495. Select the most effective measure to use to convince potential customers that the dealer's prices are very low.

- A Mean
- B Median
- C Mode
- D Range

Apr '06 Obj 9 - # 23

The manager of the Sherbet Shoppe wants to construct a circle graph showing the popularity of the various sherbet flavors he offers. Here is the tally of the favorite flavors of his first 30 customers on Saturday. In the circle graph, which proportion can be used to find the number of degrees in the sector for orange sherbet?

Favorite Sherbet Flavors

Pineapple	I
Lime	
Lemon	I
Raspberry	
Orange	

- A $\frac{10}{20} = \frac{x}{180}$
- B $\frac{10}{30} = \frac{x}{180}$
- C $\frac{10}{20} = \frac{x}{360}$
- D $\frac{10}{30} = \frac{x}{360}$

Apr '06 Obj 9 - # 53

A manufacturing company that makes semiconductors produced about 500 wafers of gallium nitride. The company found that 60 of the wafers contained defects and could not be used. Based on this information, which is the best prediction of the number of defective wafers produced when this company manufactures 8000 wafers?

- A** 133
- B** 500
- C** 960
- D** 367

Feb '06 Obj 9 - # 1

The table below shows selected school years and the number of high school graduates in millions. Which statement below is best supported by the data in the table?

School Year	Number of Graduates (millions)
1987–1988	2.8
1994–1995	2.5
1997–1998	2.4
2000–2001	2.9
2001–2002	2.8

Feb '06 Obj 9 - # 42

The ratio of juniors to seniors enrolled in technology classes is 9 to 8. If the total number of juniors and seniors enrolled in these classes is 51, which of these best represents the percent of students enrolled in technology classes who are seniors?

- A** 27%
- B** 24%
- C** 53%
- D** 47%

Feb '06 Obj 9 - # 5

- F** The percent increase of high school graduates from the 1987–1988 school year to the 1994–1995 school year was close to 12%.
- G** More students graduated from public high schools than private schools during the 2000–2001 school year.
- H** One million more students graduated from high school during the 2000–2001 school year than graduated during the 2001–2002 school year.
- J** The percent increase of high school graduates from the 1997–1998 school year to the 2000–2001 school year was close to 21%.

Feb '06 Obj 9 - # 42 (cont)

Winners from the math club's fund-raiser randomly select a gift certificate from Box A and from Box B. The contents of each box are shown below. What is the probability that the first winner will randomly select a DVD certificate and an amusement park certificate?

Box A

5 dinner certificates
4 DVD certificates
3 movie certificates
5 T-shirt certificates

Box B

4 CD certificates
3 camera certificates
5 amusement park certificates
5 television certificates

- A** $\frac{20}{289}$
- B** $\frac{9}{17}$
- C** $\frac{9}{289}$
- D** $\frac{1}{19}$

Feb '06 Obj 9 - # 25

Objective 9 - Page 4 of 6

Mrs. Farmer asked her students to vote for their favorite vegetable. The number of votes each vegetable received is listed below. If a circle graph is constructed using these data, which of the following tables best represents the central angle of each sector?

- Beets received 17 votes.
- Carrots received 21 votes.
- Lettuce received 21 votes.
- Broccoli received 19 votes.
- Potatoes received 22 votes.

Feb '06 Obj 9 - # 54

An insurance company reimbursed members of the Alonzo family 80% of their medical expenses after the family paid the first \$1000 of those expenses. If the family members received \$160 from the insurance company, what were their total medical expenses?

- A** \$960
- B** \$1200
- C** \$1128
- D** \$1410

Dec '06 Obj 9 - # 37

Vegetable	Central Angle
Beets	17°
Carrots	21°
Lettuce	21°
Broccoli	19°
Potatoes	22°

F

Vegetable	Central Angle
Beets	61°
Carrots	76°
Lettuce	76°
Broccoli	68°
Potatoes	79°

H

Vegetable	Central Angle
Beets	61°
Carrots	76°
Lettuce	76°
Broccoli	79°
Potatoes	68°

G

Vegetable	Central Angle
Beets	68°
Carrots	76°
Lettuce	76°
Broccoli	61°
Potatoes	79°

J

Feb '06 Obj 9 - # 54 (cont)

The table shows Cain's 7 quiz scores for the first 9-week period. Each score is based on a 50-point scale. Which of the following gives the highest value for Cain's quiz scores for the first 9-week period?

- F** Mode
- G** Mean
- H** Range
- J** Median

Dec '06 Obj 9 - # 40

Mrs. Travis wants to have a clown deliver balloons to her secretary's office. Clowns R Fun charges \$1.25 per balloon and \$6 for delivery. Singing Balloons charges \$1.95 per balloon and \$2 for delivery. What is the minimum number of balloons Mrs. Travis needs to purchase in order for Clowns R Fun to have a lower price than Singing Balloons?

- A** 5
- B** 6
- C** 11
- D** 12

Dec '06 Obj 9 - # 13

An orange-drink label reads "20% real fruit juice." The other ingredients are water, sugar, and flavoring. Which section of the circle graph best represents the amount of real fruit juice in the orange drink?

- A** W
- B** X
- C** Y
- D** Z

Dec '06 Obj 9 - # 45

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The math club at Hawthorne High School surveyed 180 students and found that 36 of them have a March birthday. Based on this information, which is the best prediction of the number of students at Hawthorne High School who have a March birthday if there are 867 students enrolled?

- F** 289
- G** 173
- H** 72
- J** 24

Dec '06 Obj 9 - # 60

A high school is changing its school colors. Melanie surveyed 50 students, and each student voted for one color combination. Some of the results are shown in the table below. According to the table, which is the best prediction of the number of students who will choose blue and gold if there are 1250 students enrolled at the high school?

School Colors Survey

Color Combination	Number of Students
Red and white	12
Blue and gold	?
Orange and white	6
Green and black	8
Other	10

- F** 350
- G** 900
- H** 486
- J** 98

Oct '06 Obj 9 - # 20

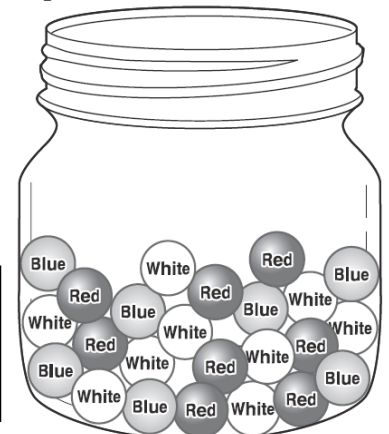
The athletic budget of \$65,000 at Central East High School is allocated proportionally to male and female athletic teams according to the student population by gender. If there are 400 female and 475 male students enrolled at Central East High School, which of these is closest to the amount allocated to female athletics?

- A** \$35,300
- B** \$29,700
- C** \$32,500
- D** \$26,000

Oct '06 Obj 9 - # 5

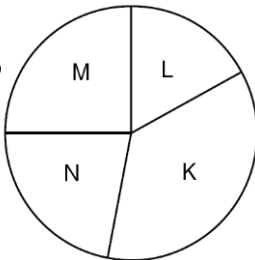
The jar shown below contains 24 solid-colored marbles of equal size. If Ray were to randomly select one marble from the jar, replace it, and then randomly select again, what is the probability that the first marble will be blue and the second will be white?

- A** $\frac{2}{3}$
- B** $\frac{7}{64}$
- C** $\frac{7}{69}$
- D** $\frac{21}{184}$



Oct '06 Obj 9 - # 22

The senior class at Lambert High School raised \$950 for a class trip. Nancy made a circle graph to represent the amount of money earned at each fund-raiser. Nancy forgot to indicate which fund-raiser corresponded to each sector. Which of the following fund-raisers could describe sector M?



- F** Spirit ribbons earned \$342.
- G** Homecoming photographs earned \$161.50.
- H** The bake sale earned \$237.50.
- J** School logo mugs earned \$209.

Oct '06 Obj 9 - # 8

The table shows the monthly sales at a pizza parlor for a 6-month period. Which is the best inference that can be made from the table?

Month	Sales
January	\$14,800
February	\$14,300
March	\$16,000
April	\$15,200
May	\$16,500
June	\$18,050

Oct '06 Obj 9 - # 51

- A** January had the lowest sales.
- B** The period with the greatest increase in monthly sales was from May to June.
- C** Sales for July will be greater than \$10,000.
- D** The sales will drop over the next 2-month period.

Oct '06 Obj 9 - # 51 (cont)