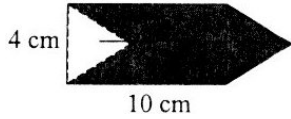
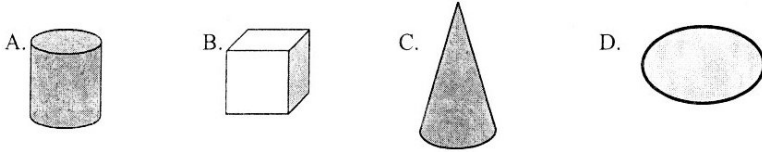


435. Amos cut a 4-cm by 10-cm rectangle out of a sheet of paper. He then cut a triangle out of one end of the rectangle and taped it onto the other end as shown below. The total area of the new shape (shaded in the picture below) is:

- A. less than 40 square cm.
- B. exactly 40 cm.
- C. greater than 40 cm.
- D. Not enough information is given to figure this out.



436. Which of these is a picture of a cylinder?

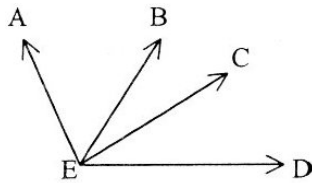


437. Jared has N baseball cards. Steve has 3 less than one-half the number of baseball cards that Jared has. Which expression below can be used to describe the number of baseball cards that Steve has?

- A. $3 - \frac{1}{2}N$
- B. $\frac{1}{2}N - 3$
- C. $3 + \frac{1}{2}N$
- D. $3N - \frac{1}{2}$

438. $\angle AEC$ measures 82° $\angle BED$ measures 62° $\angle AED$ measures 115°

Find the measure of $\angle BEC$.

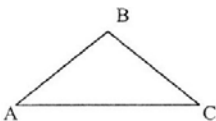


_____ degrees

439. How many prime numbers are between 120 and 130?

- A. 1
- B. 2
- C. 3
- D. more than 3

440. Triangle ABC is an isosceles triangle. Side AB and side BC are the same length. Side AC measures 12 cm. The perimeter of the triangle is 31 cm. Find the length of side AB.



_____ cm

.....

441. Find the missing number X in the following sequence.

28.4	25.8	23.2	20.6	X	15.4
------	------	------	------	---	------

.....

442. Lily has 3 pets: Piper the puppy, Curtis the cat, and Gina the gerbil. Piper weighs 3 pounds more than Curtis. Curtis weighs 5 pounds more than Gina. Altogether the 3 pets weigh 25 pounds. How many pounds does Gina weigh?

_____ pounds

.....

443. The sum of three different whole numbers is an odd number, and the product of the same three numbers is an even number. Which one of the following statements below must be true?

A. Exactly one number is odd.
B. Exactly two numbers are odd.
C. Exactly three numbers are odd.
D. Not enough information is given to answer the question.

.....

444. A fraction is equivalent to $\frac{2}{7}$. The sum of its numerator and denominator is 54. What is the numerator of the fraction?

.....

445. The 25 unbroken crackers in a snack-size bag of Crunchy Crackers weigh a total of 0.35 pounds. The regular size bag of Crunchy Crackers contains 120 crackers, all unbroken. If all Crunchy Crackers weigh the same, what is the total weight of the crackers in the regular size bag?

_____ pounds

.....

446. Tamara got a summer job. She was paid \$6.00 per hour in June, then got a 10% raise in July. Her salary in August was \$1.20 more per hour than her July salary. Tamara worked 137 hours in June, 123 hours in July, and 94 hours in August. What was her total summer wages?

\$ _____

.....

447. Popeye's Diners claims to have sold 32 million hamburgers last year. If we could count from one to 32 million at the rate of one number per second, how many days would it take? Round your answer to the nearest whole number of days.

_____ days

.....

448. Kendra puts only dimes and quarters in her piggy bank. She has two more dimes than quarters, and the value of the money in her bank is \$4.05. How many quarters are in Kendra's piggy bank?

_____ quarters

.....

449. Andres bought one shirt and one pair of jeans for \$45.00. The price of the jeans was 25% more than the price of the shirt. What was the price of the shirt?

\$ _____

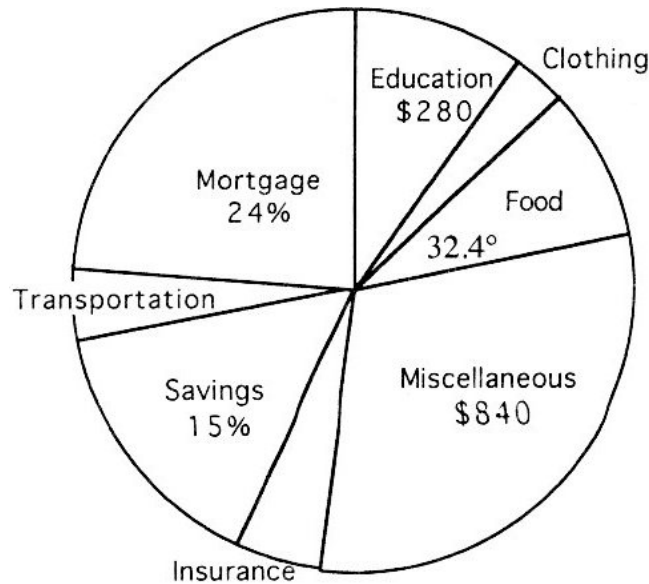
450. The weight of the candy in a case of SweetTreats is 4.5 pounds. A case contains 36 bags of SweetTreats and each bag costs \$1.99. The weight of the candy in each bag of SweetTreats is the same. What is the weight (in ounces) of the candy in a single bag of SweetTreats?

Fact: There are 16 ounces in one pound.

_____ ounces

The circle graph below shows how the Sanchez family allocates its total monthly net earnings of \$2,800.

Use the circle graph below to answer questions 451- 454.



451. How much money does the Sanchez family allocate each month to savings?

\$ _____

452. What is the measure of the central angle for the sector labeled Education?

_____ degrees

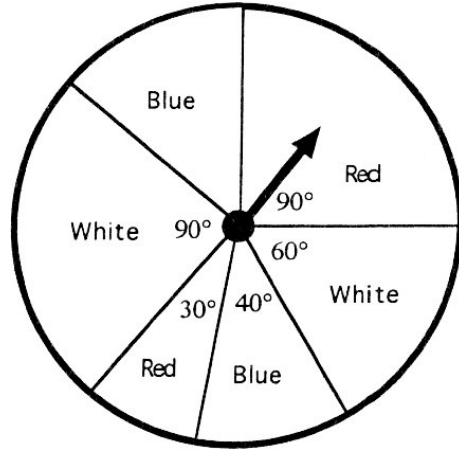
453. What percent of the family's monthly net earnings is allocated for food?

_____ percent

454. The Sanchez family plans to increase their mortgage allocation to \$700 per month. How much more money do they need to allocate for their mortgage payment?

\$ _____

Assume that when the spinner is spun, the arrow stops in one of the sectors labeled Red, White, or Blue. Use the spinner to answer questions 455 and 456.



455. The spinner is spun once. Find the probability that the arrow stops in a sector that is labeled White. Write the answer as a fraction in simplest form.

456. The spinner is spun once. Find the probability that the arrow stops in a sector that is labeled Blue. Write the answer as a fraction in simplest form.

457. A number is selected at random from all possible 2-digit whole numbers. What is the probability that the number selected contains exactly one 7? Write the answer as a fraction in simplest form.

458. The mean of the seven numbers below is 66.
64, 66, 64, 66, N, 63, 70

Find the value of N.

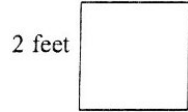
459. According to the Census Bureau, the 1990 population of Washington, D.C. was 606,900. The 1990 population of New Hampshire was 104,500 less than twice the population of Washington, D.C. Find the 1990 population of New Hampshire.

460. There were two gallons of lemonade to be served at a picnic. Each person got one cup of lemonade. If one pint of lemonade was left at the end of the picnic, how many people got lemonade?

Facts: 1 pint = 2 cups 1 quart = 2 pints 1 gallon = 4 quarts

_____ people

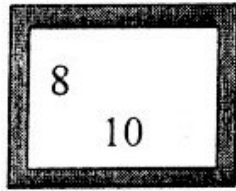
461. A square measures 2 feet on each side. What is the area of this square in square inches?



_____ square inches

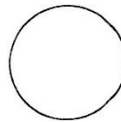
.....
462. Jamie divided 1756 by a whole number divisor.
The quotient was 7 and the remainder was 132. Find the divisor.

.....
463. Morgan drew a rectangle that measured 8 inches by 10 inches. She taped a 2-inch border all the way around the outside of the rectangle. The border is shaded in the picture below. What is the area of the border?



_____ square inches

.....
464. Suppose the circle below has a diameter of $4\frac{3}{8}$ inches. If point A is located $2\frac{1}{4}$ inches from the center of the circle, then point A is located:



- A. inside the circle.
- B. outside the circle.
- C. on the circle.
- D. Not enough information is given to figure this out.

.....
465. Garrett was told to multiply all six of the numbers below together.

1000 100 10 0.1 0.01 0.001

Garrett only multiplied 5 of the six numbers together and got 10 for the product. What number did Garrett forget to use when he multiplied the numbers together?

.....
466. Two prime numbers are multiplied together. The product is:

- A. always an even number.
- B. always a prime number.
- C. never a prime number.
- D. sometimes a prime number and sometimes not.

.....

467. On June 15th Father Murphy found one ant on his peony bush.

On June 16th he found 3 ants on this peony bush.

On June 17th he found 6 ants on this peony bush.

On June 18th he found 10 ants on this peony bush.

On June 19th he found 15 ants on this peony bush.

This same pattern continued through June 24th.

How many ants did Father Murphy find on his peony bush on June 24th?

_____ ants

468. Find the sum: $1 + 2 + 3 + 4 + 5 + 6 + \dots + 59 + 60$

469. Katie buys used cars. She determines her initial offer by deducting two-ninths of the asking price, then adding 6.5% sales tax. What is Katie's initial offer (to the nearest dollar) on a car that has an asking price of \$9945?

\$ _____

470. Malik wrote down all the positive factors of 60, including 1 and 60. What fraction of those factors are prime numbers? Write the answer as a fraction in simplest form.

471. Sixty percent of the students in the school choir were girls. After the winter break, four boys left the choir. Now two-thirds of the choir are girls. How many boys are currently in the school choir?

_____ boys

472. When a number is increased by 40 percent, the resulting number is 10 more than the original number. What is the original number?

473. There are four sisters in a family, ages 16, 15, 12, and 11. Grandma divides \$216 among the four sisters so that each gets \$20 more than her next-younger sister. How much money does the oldest sister get?

\$ _____

474. The digits 3, 5, 7, and 8 are each placed in one of the boxes below in order to write a multiplication problem for two decimal numbers. Each digit is used exactly once.

$$\square . \square \times \square . \square$$

What is the largest possible product that can be formed? Write your answer in decimal form.

475. The local amusement park charges an admittance fee of \$4 for adults and \$3 for children. There were half as many adults as children, and the total collected was \$400. How many children were admitted into the amusement park?

_____ children

476. In a special event in a track meet, each of four runners is timed as they run one lap around a circular track. The team score is the sum of the three fastest times. Sam ran his lap in 1 minute 57 seconds. Nate ran 11 seconds faster than Sam. Jermaine ran 9 seconds faster than Nate. Dimitrius ran his lap in 1 minute 59 seconds. What was the team score for the runners above?

_____ minutes _____ seconds

477. A kennel boards dogs, cats, and rabbits. One-eighth of the animals are rabbits. The ratio of cats to dogs is 4 to 3. There are 48 animals altogether. How many of the animals are dogs?

_____ dogs

478. A bag contains red marbles and blue marbles. There are 25 blue marbles, which is 62.5% of the marbles in the bag. How many red marbles are in the bag?

_____ red marbles

479. There are 6 red, 4 white, and some blue marbles in a box. The marbles are all identical except for color. You select a marble without looking. The probability that it is blue is $\frac{1}{3}$. How many blue marbles are in the bag?

_____ blue marble(s)

480. There are 6 red, 4 white, and some green balls in a bag. The balls are all identical except for color. When 3 red balls are removed from the bag, the probability of randomly selecting a red ball from the remaining balls is $\frac{1}{4}$. How many green balls are in the bag?

_____ green balls(s)

Valdez has seven Hardy Boys books. The following numbers represent the number of pages in each of the books.

151, 152, 154, 153, 167, 161, 182

481. What is the median number of pages for the seven books?

_____ pages

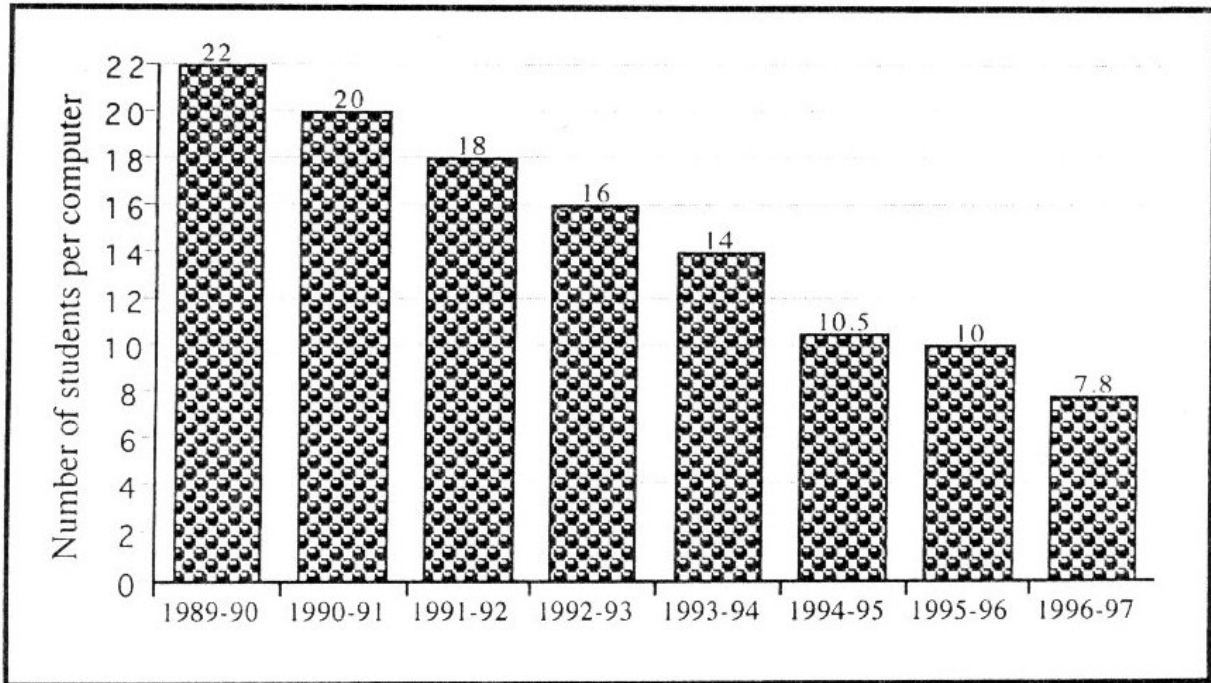
482. What is the mean number of pages per book?

_____ pages

483. On his birthday, Valdez received another Hardy Boys book to add to his collection. He now finds that the mean number of pages for the eight books is 161. How many pages are in the book that he received for his birthday?

_____ pages

The bar graph below shows the average number of students per computer in the United States for the school years 1989-97.



For example, the graph shows that there was an average of 20 students per computer in the school year 1990-1991.

Use the information presented in the graph to answer questions 484 and 485.

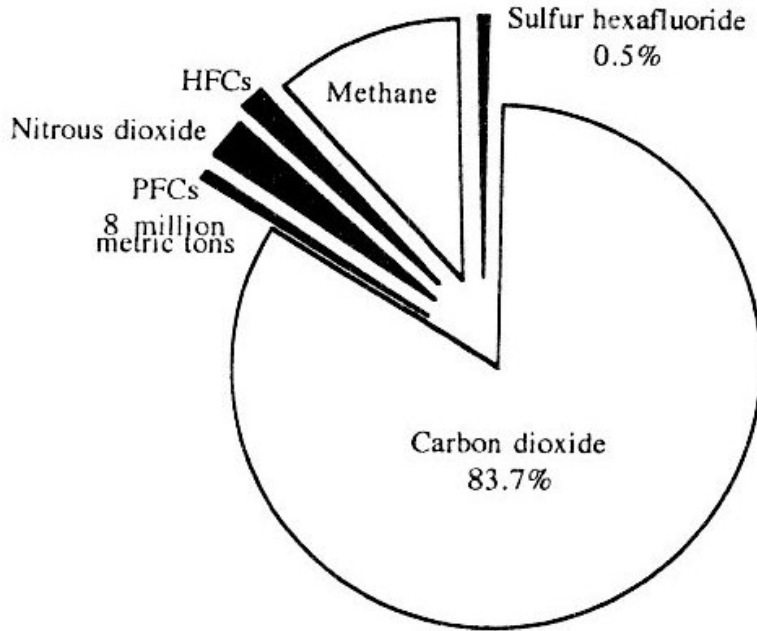
484. By what percent did the average number of students per computer decrease from the 1990-91 school year to the 1991-92 school year?

_____ percent

485. The average number of students per computer in the 1989-90 school year was 12 percent less than the average number of students per computer in the 1988-89 school year. What was the average number of students per computer in the 1988-89 school year?

_____ students

The circle graph below shows the relative contributions of six gases released into the atmosphere in the U.S. in 1995.



Use the information presented in the chart to answer questions 486 - 488.

486. In 1995, a total of 1,559 million metric tons of gases were released into the atmosphere. How many million metric tons of carbon dioxide were released into the air in 1995? Round your answer to the nearest whole number of million metric tons.

_____ million metric tons

487. What is the angle measure of the sector labeled Sulfur hexafluoride?

_____ degrees

488. What percent of the total amount of 1,559 million metric tons of gases was contributed by PFCs? Round your answer to the nearest tenth of a percent.

_____ percent

489. Melinda ran 440 yards in 90 seconds. What was Melinda's speed in miles per hour? Note: There are 5280 feet in one mile.

_____ miles per hour

490. Each of the digits 4, 5, 6, and 7 is written on a separate 3 x 5 note card. The three cards are then placed into a paper bag. Without looking, one of the cards is selected and placed on a table. Then a second card is selected without looking and placed to the right of the first card. What is the probability that the two-digit number formed is a multiple of 9? Write the answer as a fraction in simplest form.

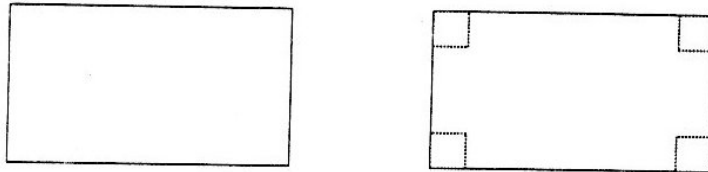
491. A circular tortilla with diameter of 10 inches has a calorie count of 120 calories. What is the calorie count of a circular tortilla of the same thickness but with a diameter of 15 inches? Fact: The formula for the area of a circular region is $A = \pi r^2$, where r is the radius of the circular region.

_____ calories

.....
492. Four paper bags contain a total of 22 oranges. The first and second contain a total of 10 oranges, the second and third contain a total of 13 oranges, the third and fourth a total of 12 oranges. How many oranges are there altogether in the first and fourth bags?

_____ oranges

.....
493. Square corners, 4 cm on a side, are cut from a rectangular sheet of cardboard that measures 16 cm by 32 cm.



The sides are then folded up to form an open box. Find the area (in sq. cm) of the bottom of the box.

_____ sq. cm

.....
494. How many different two-digit prime numbers can be formed using the digits 3, 6, 7, and 8?

.....
495. Seven numbers are arranged from smallest to largest. The median of the seven numbers is 26. The average of the three smallest numbers is 22. The average of the three largest numbers is 32. What is the sum of the seven numbers?

.....
496. What is the date 20,000 minutes after January 1st begins? Fact: A day begins immediately after midnight.

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