

683. In the table below, each letter represents a number.
The sum of any three consecutive entries is 30.

A	15	B	8	C	7	8
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What number does the letter A represent?

684. The diameter of circle X is the same length as the radius of circle Y. Which one of the statements below is correct?

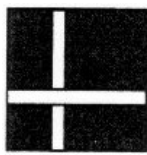
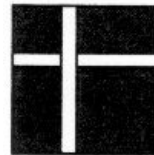
- A. The area of circle X is one-half the area of circle Y.
- B. The area of circle X is twice the area of circle Y.
- C. The area of circle X is one-fourth the area of circle Y.
- D. The area of circle X is four times the area of circle Y.

Write the letter of the correct choice on the blank to the right.

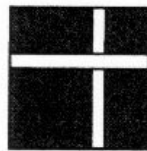
685. Marc rode his bicycle 15 miles. His average speed was 12 miles per hour. How many minutes did Marc ride his bicycle?

_____ minutes

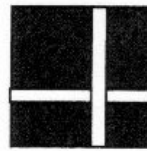
686. If the shape to the right is rotated 270 degrees counterclockwise, which of the following would be the result?



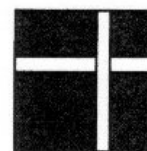
A.



B.



C.



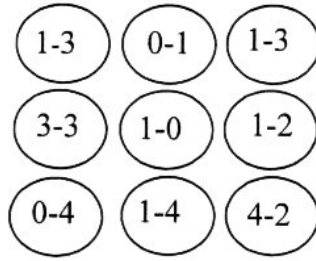
D.

687. Natalie selected a number. When she multiplied it by 9, the result was 55 more than 4 times the number. What number did Natalie select?

688. In the following sequence, find the number represented by N.

3 7 15 31 N 127

689. Anna had 9 different containers of marbles. On each container she recorded the number of groups of 5 marbles in the container and the number left over.



For example, 1-3 indicates that a container has 8 marbles (one group of 5 marbles and 3 marbles left over). Anna put all the marbles from the 9 containers into one big container and used the same recording system. What would Anna record on the big container?

690. The top of a table is a circle that is 30 inches in diameter. A circular table cloth hangs over the edge of the table 12 inches all around. Which of the following is the best approximation of the area of the tablecloth? Use 3.14 for π .

- A. 4.5 ft² B. 10 ft² C. 14 ft² D. 16 ft²

691. Find the largest two-digit odd number that is divisible by both 3 and 7.

692. Judith is making salsa from her garden vegetables. The vegetables originally weighed 53 ounces. After they were prepared, the vegetables weighed 46 ounces - the remainder was tossed in the compost pile. What percent of the original vegetables was tossed in the compost pile? Round your answer to the nearest percent.

_____ %

693. The United States Department of Agriculture reported that the typical American eats 10.1 pounds of carrots per year, paying an average of \$1.20 per pound. Based on this information, how much would a group of five typical Americans spend on carrots per year?

\$ _____

694. A packet of sunflower seeds weighs $\frac{3}{4}$ ounce. Several packets are placed in a box. The weight of the packets in the box is 12 ounces. How many packets are in the box?

_____ packets

695. In a video game, the first score is worth 1.5 points, the second score is worth 3.75 points, and the third score is worth 6 points. After the first score, each score is worth 2.25 points more than the previous score. How much is the eighth score worth?

_____ points

696. How many seconds are in $\frac{1}{3}$ of $\frac{1}{4}$ of $\frac{1}{2}$ of one whole day?

.....
697. A sled is on sale for 20% off the regular selling price. The sale price of the sled is \$14.80. What is the regular selling price of the sled?

_____ \$ _____

.....
698. Jeffrey was supposed to multiply his number by $\frac{1}{3}$, but instead subtracted $\frac{1}{3}$.

His result was $1\frac{5}{6}$. What result would Jeffrey have gotten if he had performed the calculation correctly? Write your answer as a fraction in simplest form

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A family has three children of different ages. List all possible arrangements of boys and girls from youngest to oldest in such a family. For example, one arrangement is GGB.

699. How many different arrangements should be in the list?

_____ arrangements

.....
700. Assume that the probability of having a boy is the same as the probability of having a girl. What is the probability that there are no girls in this family? Write your answer as a fraction in simplest form.

.....
The chart below shows partial information on the number of students enrolled in Algebra I in four schools. This information is to be used to construct a circle graph that represents all the Algebra I students in the four schools.

School	Enrollment	Percent	Central angle measure
A	36	---	18
B	54	7.5	---
C	252	35	126
D	---	---	---

Use the information in the chart to answer questions 701-703.

701. What percent of the total number of Algebra I students are from school A?

_____ percent

.....
702. Find the measure of the central angle for the sector representing the Algebra I students in school B.

_____ degrees

.....
703. How many students are enrolled in Algebra I at school D?

_____ students

704. Henry is in Hereville. There are five roads leading from Hereville to Thereville and four roads leading from Thereville to Somewhereville. How many possible routes can Henry use to drive from Hereville to Somewhereville if he must first go through Thereville?

_____ routes

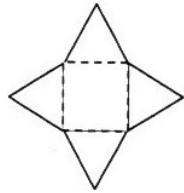
705. A bag contains 12 red and 8 green M&M's. Without looking into the bag, Roger removes one M&M at a time. What is the smallest number of M&M's Roger must remove to be sure to have at least one M&M of each color?

_____ M&M's

706. Chuck and Randy know that a bag contains 12 red and 8 green M&M's. After Chuck removes some green M&M's from the bag, Randy correctly figured that the probability of randomly selecting a green M&M is now $\frac{1}{7}$. How many green M&M's did Chuck remove from the bag?

_____ green M&M's

707. The pattern below is cut out along the solid lines. The triangles are folded up along the dotted lines to form a three-dimensional shape. Which one of the terms below describes the resulting shape?



- A. pyramid B. cone C. cylinder D. prism

708. The distance from Midtown to Centerville is 6 miles less than two times the distance from Midtown to Glenville. Let N represent the distance in miles from Midtown to Centerville. Which expression below represents the distance from Midtown to Glenville?

- A. $2N + 6$ B. $\frac{N-6}{2}$ C. $2N - 6$ D. $\frac{N+6}{2}$

709. Gordy opened some peanut shells. Some shells contained 2 peanuts each. Two shells contained 3 peanuts each. The rest of the shells contained only one peanut each. After opening up 50 shells, he had 91 peanuts. How many shells originally contained only one peanut?

_____ shells

710. Luis had exactly four pennies, one nickel, one dime, one quarter, and one half-dollar coin. He lost one coin and now has exactly seven times as much money as his little sister. What coin did Luis lose?

- A. penny B. nickel C. dime D. quarter E. half-dollar

711. Both 12 and 32 are examples of two-digit numbers whose digits differ by one. What is the largest two-digit number that is divisible by 13 and whose digits differ by 1?

712. A bicycle wheel has a diameter of 24 inches. About how many complete revolutions does the wheel make when the bike travels 300 feet?

- A. 4 B. 13 C. 24 D. 48

Write the letter of the correct choice on the blank to the right

713. It takes 365.25 days for Earth to orbit the sun. It takes 88 days (Earth time) for Mercury to orbit the sun. How many times will Mercury orbit the sun during the time that it takes for Earth to orbit the sun 352 times?

_____ times

714. The label on a box of tea bags indicates that it contains 1.18 ounces, which is 33 grams. According to this information, how many grams are there in one pound? Round your answer to the nearest gram.

_____ grams

715. Michael's sailboat has a triangular sail. The area of the sail is 9.6 square meters and the base of the sail is 3.2 meters. How tall is the sail?

_____ meters

716. Mr. Jones and Mr. Olson rented a tree stump removal machine for \$87. The both agreed to pay an amount according to the length of time they used the machine.

Mr. Jones used the machine for 1 hour 50 minutes.

Mr. Olson used the machine for 3 hours 40 minutes.

How much of the \$87 should Mr. Olson pay?

\$ _____

717. What is the smallest three-digit prime number that has three different digits, none of which is zero?

718. The United States Department of Agriculture reported that the average American is drinking less milk than in the past.

Consumption of milk declined from an annual average of 36 gallons per person in the 1950s to 23 gallons in 2000. By what percent did milk consumption per person decline during this period?

Round your answer to the nearest percent.

_____ %

719. The weight of a baseball is $\frac{2}{5}$ that of a softball. Together, a baseball and a softball weigh 12.04 ounces. How much does a softball weigh?
_____ ounces

.....
720. Assume that there is a machine that can make one quarter per minute. This machine began to make quarters at noon on January 1, 2000 and works continuously. During which calendar year will the machine have produced a total of one million dollars worth of quarters?

.....
721. Roozbeh and LaTonya were selling tickets for the school play. Adult tickets cost \$5.50 and student tickets cost \$3.50. They sold a total of 134 tickets and collected \$571. How many student tickets did they sell?
_____ student tickets

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722. I am a decimal number.
All four of my digits are different prime numbers.
When rounded to the nearest unit, I round to 3.
I am the largest number with the properties listed above.
What decimal number am I?

.....
723. LeRoy's first class begins at 7:32 and ends at 8:16. He is allowed 4 minutes to get to his next class, which starts at 8:20 and ends at 9:04. If the rest of his day follows this pattern, at what time will his fourth class end?

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724. Find 30% of $\frac{1}{4}$ of 12.8.
Write your answer as a fraction in simplest form. _____

.....
725. Tickets for the school dance were sold over a three-day period. One-fourth of the tickets were sold on Monday, 15 were sold on Tuesday, and 75% of the remaining tickets were sold on Wednesday. At this point, there were 6 tickets remaining. How many tickets were originally available for the dance?
_____ tickets

.....
726. One lap of the Indianapolis Speedway is 2.5 miles. At a constant rate of 180 miles per hour, how many seconds are required to complete one lap?
_____ seconds

An experiment consists of observing the number of toys 40 children played with during a given period of time. The table below shows typical results of the experiment.

Number of toys	0	1	2	3	4
Number of children	1	1	12	9	17

For example: The table shows that 12 children played with 2 toys during the given period of time. Use the information in the table to answer questions 727 and 728.

727. What is the probability that a child will play with more than two toys during the experiment? Write your answer as a fraction in simplest form.

.....

728. What is the mean number of toys a child will play with?
_____ toys

729. A bag contains 12 red, 8 green, and 5 blue balls. The balls are identical in every way except for color. How many red balls must be added to the bag so that the probability of randomly selecting a blue ball is $\frac{1}{6}$?

.....
_____ red balls

730. Find the sum of the mean, median and mode for the following numbers.
17 15 15 16 15 24 22 24

.....

All TravelSafely travelers checks have ten digits. The sum of the ten digits must be a multiple of 9; that is, the sum is evenly divisible by 9.

For example:
The sum of the digits of 4350000087 is 27.
This sum is a multiple of 9 because it is evenly divisible by 9.

Use the facts above to answer questions 731 - 733.

731. The ninth digit on a travelers check is missing as shown below.

3 2 5 0 0 1 6 8 ____ 7

Find the missing digit.

.....

732. Two digits on a travelers check are represented by **m** and **n** as shown below.

3 2 5 m 0 6 n 8 2 3

Find the largest value of **m + n**.

.....

733. It is known that **d** represents an even number in the check number shown below.

3 2 5 d 0 1 6 8 7 k

How many choices are there for **k**? **Reminder:** 0 is an even number.

.....
_____ choices

The table shows the number (in thousands) of all degrees earned in 1990.

	Bachelor's	Master's	Doctorate
Male	481	156	23
Female	536	163	13

Use the information in the table to answer questions 734-736.

734. The table shows that 481,000 males earned a bachelor's degree in 1990. What percent of all bachelor's degrees were earned by males in 1990? Round your answer to the nearest percent.

_____ percent

735. What percent of all degrees earned in 1990 were doctorates? Round your answer to the nearest tenth of a percent.

_____ percent

736. The information in the table is used to make a circle graph showing only the type of degree earned in 1990. Find the measure of the central angle of the sector representing master's degrees. Round your answer to the nearest degree.

_____ degrees

737. The Math Club held its annual pancake breakfast. Ms. Jackson flipped pancakes at a constant rate of four pancakes per minute. Ms. Adams flipped pancakes at a constant rate of five pancakes per minute and worked 20 minutes longer than Ms. Jackson. They flipped a total of 730 pancakes. For how many minutes did Ms. Jackson flip pancakes?

_____ minutes

738. The Ferris wheel was invented for Chicago's 1893 World's Fair. Strong steel bars from the center of the wheel extended to each of its 36 cars. What was the measure of the interior angle formed by the two steel bars for the third and sixteenth cars?

_____ degrees

739. A rectangular picture measures 8 inches by 10 inches. This picture is surrounded by a uniform two-inch border, allowing the entire picture to show. What is the area of the border?

_____ square inches

740. Megan has three chips. Two of the chips show red on one side and blue on the other. The third chip shows blue on both sides. When a chip is tossed, it is equally likely to show either side when it lands. Megan tosses all three chips. What is the probability that at least two chips show blue? Write your answer as a fraction in simplest form.

741. A theater in Andover, Minnesota recently broke the world record for the world's largest box of popcorn. The box measured 18 feet 4 inches high, 11 feet long, 5 feet wide, and contained 6,623,837 kernels. If the kernels were equally distributed, how many kernels were contained within each cubic foot of the popcorn box? Round your answer to the nearest kernel.

_____ kernels

742. The 32 students in Alexander's class were asked what they were going to do after school. Seventeen said that they were going to choir practice, 19 said they were going to play rehearsal, and 3 said they were going to neither. How many students were going to both choir practice and play rehearsal?

_____ students

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743. Jenny is watching her two toy trains as they each circle around the track in their own lane. The large train requires 40 seconds to complete one revolution of the track and the small train requires 36 seconds. Both trains are placed at the starting line and start to circle the track at exactly noon. When is the next time that both trains will be at the starting line at exactly the same time?

_____ p.m.

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744. Nick bought school supplies. He found that:
3 pencils and 2 notebooks cost \$3.05.
2 pencils and 3 notebooks cost \$3.35.
He bought 2 pencils and 1 notebook. How much did Nick pay for these school supplies? Assume that no sales tax was charged.

\$ _____

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