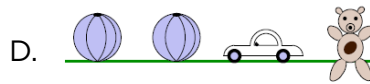
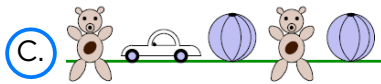
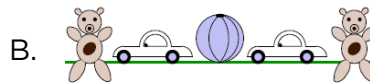
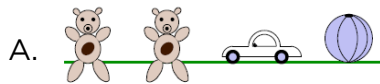


Level 1

1. Dominic put two teddy bears, one car, and two balls on his shelf. Which of the pictures below shows his shelf?



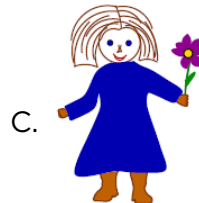
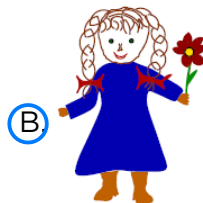
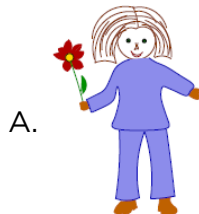
2. There were 9 four-person tables in the room where Greg had his birthday party. When Greg and all his guests sat down, there were still 7 empty seats. How many guests came to Greg's party?

A. 29 ☒ B. 28 C. 27 D. 25

3. A dog, a cat, and a monkey together weigh 12 pounds. A cat and 2 monkeys weigh 10 pounds. A dog and 3 monkeys together weigh 2 pounds more than a cat, a dog, and one monkey. How much does a cat weigh?

A. 3 pounds ☒ B. 4 pounds C. 5 pounds D. 6 pounds

4. Katie's doll is wearing a dress, has two braids, and is holding one flower in her hand. Which picture shows Katie's doll?



5. In 36 years, Mark's grandmother will celebrate her 100th birthday. How old is Mark's grandmother now?

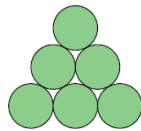
A. 74 ☒ B. 84 C. 64 D. 36

6. Fido the Dog, Philemon the Cat, and 4 monkeys together weigh 24 lbs. Fido and one monkey together weigh 11 lbs. Philemon and 2 monkeys together weigh 1 lb less than Fido and one monkey weigh together. Each of the monkeys weighs the same. How much does Philemon weigh?

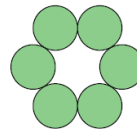
A. 3 lbs ☒ B. 4 lbs C. 5 lbs D. 6 lbs

Level 2

1. The figure shown in Picture 1 was made out of six identical coins. What is the smallest number of coins that we need to move to make the figure shown in Picture 2?



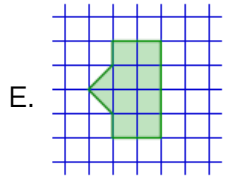
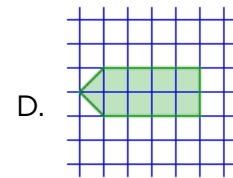
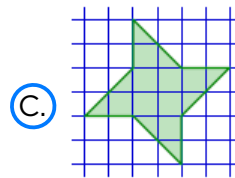
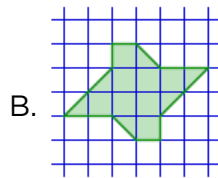
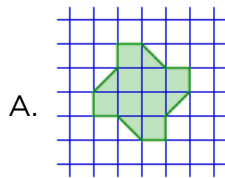
Picture 1



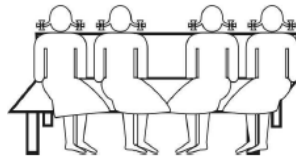
Picture 2

- A. 1 ☒ B. 2 C. 3 D. 4 E. 5
2. Matthew and Clara live in a skyscraper. Clara lives 12 floors above Matthew. One day Matthew went to visit Clara, and he took the stairs up from his apartment to Clara's apartment. Halfway up he was on the 8th floor. On what floor does Clara live?
- A. 12 ☒ B. 14 C. 16 D. 20 E. 24
3. Anna, Beata, and Jack go to the same school. One day the librarian said to them, "Guess how many books we have in the school library." Anna said 2010, Beata said 1998, and Jack said 2015. It turned out that the number of books in the library differed from the numbers given by the children by 12, 7, and 5 (these numbers are not necessarily in the order they made their guesses). How many books are there in their school library?
- A. 2005 B. 2008 ☒ C. 2003 D. 2020 E. 2022
4. Michael is painting the word KANGAROO on a poster. Each day he paints one letter. He painted the first letter on a Wednesday. What day of the week will it be when he paints the last letter?
- A. Monday B. Tuesday ☒ C. Wednesday D. Thursday E. Friday

5. Which of the figures below has the greatest area?



6. Four friends, Masha, Sasha, Dasha, and Pasha, were sitting on a bench. First Masha changed places with Dasha. Then Dasha changed places with Pasha. At the end the girls sat on the bench in the following order from left to right: Masha, Sasha, Dasha, Pasha. In what order from left to right were they sitting in the beginning?

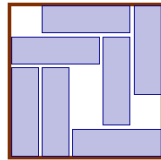


- A. Masha, Sasha, Dasha, Pasha
☒ C. Dasha, Sasha, Pasha, Masha
 E. Pasha, Masha, Sasha, Dasha

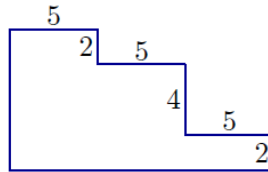
- B. Masha, Dasha, Pasha, Sasha
 D. Sasha, Masha, Dasha, Pasha

Level 3

1. Seven identical candy bars were arranged on the bottom of a square box. It is possible to slide the candy bars so that there will be room for one more candy bar. What is the least number of candy bars that must be moved to make room for one more candy bar?



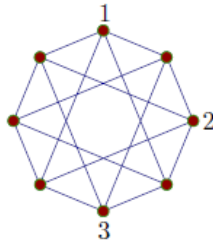
- A. 1 **B. 2** C. 3 D. 4 E. 5
2. Each pair of adjacent sides of the figure shown in the picture is perpendicular. What is the perimeter of this figure?



- A. $3 \times 5 + 4 \times 2$ B. $3 \times 5 + 8 \times 2$ C. $6 \times 5 + 4 \times 2$
 D. $6 \times 5 + 6 \times 2$ **E. $6 \times 5 + 8 \times 2$**
3. Adam and Tom are walking in the same direction around a circular table and counting chairs. They begin their counts with different chairs. Tom's twentieth chair is Adam's fourth chair, while Tom's tenth chair is Adam's forty-sixth chair. How many chairs are there at the table?

- A. 50 **B. 52** C. 56 D. 60 E. 80
4. Basil is writing the word KANGAROO, one letter each day. He wrote the first letter on Wednesday. On what day will he finish writing the word?
- A. Monday B. Tuesday **C. Wednesday** D. Thursday E. Friday

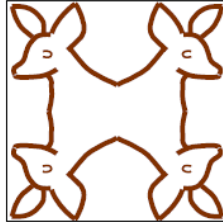
5. 8 points are connected with several segments as shown in the picture. Each of these points needs to be labeled with number 1, 2, 3, or 4. The numbers on each end of any given segment need to be different. Three of the points are already labeled (see the picture). How many points will be labeled with 4?



- A. 1 B. 2 C. 3 **D. 4** E. 5
6. In a certain month there were 5 Saturdays and 5 Sundays, but only 4 Fridays and 4 Mondays. In the following month there will be:
- A. 5 Wednesdays** B. 5 Thursdays C. 5 Fridays D. 5 Saturdays
E. 5 Sundays

Level 4

1. How many axes of symmetry does the figure have?



- A. 0 B. 1 ☒ C. 2 D. 4 E. infinitely many
2. A lumberjack chopped wood, each time cutting a piece of wood in half. When he finished he observed that after making 53 cuts he had 72 pieces of wood. With how many pieces did he begin?
- A. 17 B. 18 ☒ C. 19 D. 20 E. 21
3. Sides AB and AC of the triangle ABC are the diameters of two circles. These circles intersect at points A and P. Then, point P is necessarily
- A. the center of a circle inscribed in triangle ABC
 B. the midpoint of side BC
 C. inside triangle ABC
 D. outside triangle ABC
☒ E. the point of intersection of the height of triangle ABC at angle A with side BC
4. Ellie has 5 cubes and 3 tetrahedrons. How many sides do these solids have all together?
- ☒ A. 42 B. 48 C. 50 D. 52 E. 56

5. During three consecutive games the soccer team FC Kangaroo made a total of three goals and had one goal scored against them. This soccer team won one of these three games, lost one game, and tied one game. What was the final score of the game that FC Kangaroo won?

A. $2 - 0$ B. $0 - 1$ C. $1 - 0$ D. $2 - 1$ ☒ E. $3 - 0$

6. Inside a square with a side length equal to 7 cm there is a square with a side length equal to 3 cm. A third square with a side length equal to 5 cm intersects each of the other two squares (see illustration). The difference between the area of the black region and the sum of the areas of the shaded region is



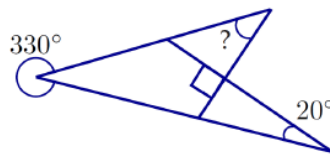
A. 0 cm^2 B. 10 cm^2 C. 11 cm^2 ☒ D. 15 cm^2
E. impossible to determine

Level 5

1. It is now the year 2010. During yesterday's math class the teacher said that it was his birthday and that the product of his age and his father's age is 2010. In what year was the teacher born?

A. 1943 B. 1953 ☒ C. 1980 D. 1981 E. 1995

2. What is the measure of the angle indicated with the question mark?



A. 50° ☒ B. 40° C. 30° D. 20° E. 10°

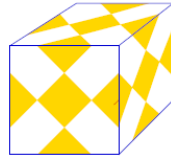
3. How many three digit numbers have the property that the middle digit is the arithmetic mean of the other two digits?

A. 50 B. 25 C. 29 D. 41 ☒ E. 45

4. A pedestrian crosswalk consists of black and white stripes each 0.5 m wide. The crosswalk begins and ends with a white stripe, and there are 10 white stripes in all. How wide is the crosswalk?

A. 11 m B. 10.5 m C. 10 m ☒ D. 9.5 m E. 9 m

5. A cube with side length equal to 10 cm was covered with a certain number of identical yellow squares in such a way that all the sides look identical (see illustration). What area of the cube, in square centimeters, is covered by yellow squares?



- A. 37.5 B. 150 C. 225 D. 300 E. 375
6. Choose four edges of a cube in such a way that no two edges will share a vertex. In how many ways can this be done?
- A. 6 B. 8 C. 9 D. 12 E. 18

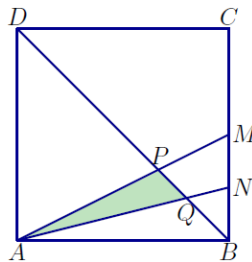
Level 6

1. Which of the following could be the number of edges of a prism?
 A. 100 B. 200 C. 2008 D. 2009 **E. 2010**

2. A bag contains blue, green, and red marbles. It is known that if five marbles are drawn at random, then at least two will be red and at least three will be of the same color. How many of the marbles are blue?

A. 1 B. 2 C. 3 D. 4
 E. more information is needed

3. Square ABCD has a side length of 1. Point M is the midpoint of side BC, N is the midpoint of segment BM, and P and Q are the points of intersection of diagonal BD with segments AM and AN respectively. What is the area of the shaded triangle AQP?



A. $\frac{1}{4}$ B. $\frac{1}{5}$ C. $\frac{1}{6}$ D. $\frac{1}{12}$ **E. $\frac{1}{15}$**

4. The difference between a positive integer and the sum of its digits is always divisible by:

A. 7 B. 11 C. 2 D. 5 **E. 9**

5. Let A_n represent the set of n -digit numbers that do not contain the digit 0. What should the value of n be so that there are as many numbers without the digit 9 in the set A_n as there are numbers with exactly one digit equal to 9 in the same set?

A. 8

B. 9

C. 12

C. 15

E. 2011

6. A bowl contains only red and green marbles. The probability of selecting two marbles of the same color from this bowl is equal to $\frac{1}{2}$. Which of the following is a possible number of marbles in this bowl?

A. 81

B. 101

C. 1000

D. 2011

E. 10001