SET 1 OLYMPIAD 2

2A
3 min.
42%

Marty has 6 more pogs than Jen has. After he gives 10 pogs to Jen, how many more pogs will Jen have than Marty?

1B
4 min.
37%

A rectangular box is 2 cm high, 4 cm wide, and 6 cm deep. Michelle packs the box with cubes, each 2 cm by 2 cm by 2 cm, with no space left over. How many cubes does she fit into the box?

1C
5 min.
38%

At the right, boxes represent digits and different letters represent different non-zero digits. What three-digit number is the least possible product?

$$\begin{array}{r} A\ B \\ \times\ C\ B \\ \hline \square\,9 \\ \square\square\ \\ \hline \square\square\square \end{array}$$

2D
5 min.
24%.

List all counting numbers which leave a remainder of 4 when divided into 22.

2E
6 min.
60%

Admission to the local movie theater is \$3 for each child and \$7 for each adult. A group of 12 people pay \$64 admission. How many children are in this group?

SET 1 OLYMPIAD 3

3A
4 min.
53%

Suppose a standard twelve-hour clock now shows a time of 10:45. What time will the clock show 100 hours from now?

3B
5 min.
41%

The tower shown at the right is made by placing congruent cubes on top of each other with no gaps. Not all cubes are visible. How many cubes does the tower contain?

3C
4 min.
34%

The Panthers team won exactly 2 of its first 9 games. By winning all its remaining N games, the Panthers ended with victories in exactly half of the games it played. What number does N represent?

3D
6 min.
56%

If Mrs. Murphy separates her class into groups of 4 students each, 1 student is left over. If she separates her class into groups of 5 students each, 2 students are left over. What is the least number of students the class could have?

3E
5 min.
33%

If 16 is added to one-third of a number, the result is three times the number. What is the number?

SET 1 OLYMPIAD 4

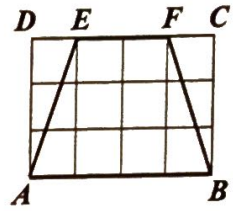
4A
4 min.
37%

What is the value of the whole number N, if:

$$N = \frac{1}{2} \text{ of } \frac{2}{3} \text{ of } \frac{3}{4} \text{ of } \frac{4}{5} \text{ of } 100?$$

4B
5 min.
66%

ABCD is a rectangle whose area is 12 square units. How many square units are contained in the area of trapezoid *EFBA*?



4C
5 min.
46%

The number 6 has exactly four different factors: 1, 2, 3, and 6. How many different factors does the number 36 have?

4D
5 min.
36%

A car needs 1 minute 30 seconds to travel a distance of 1 mile. At this rate, how many miles will the car travel in 1 hour?

4E
6 min.
27%

At a special sale, all pens are sold at one price and all pencils at another price. If 3 pens and 2 pencils are sold for 47¢, while 2 pens and 3 pencils are sold for 38¢, what is the cost of a set of one pen and one pencil, in cents?

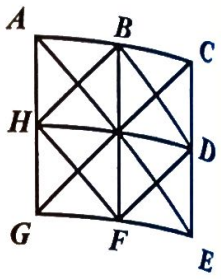
SET 1 OLYMPIAD 5

5A
3 min.
51%

In the number 203,500, the last two zeroes are called *terminal zeroes*. If the multiplication $30 \times 40 \times 50 \times 60 \times 70$ is done, how many terminal zeroes will the product have?

5B
6 min.
58%

Square $ACEG$ is drawn at the right. Points B, D, F, and H are the midpoints of the sides of the square. What is the total number of squares of all sizes which can be traced using only the line segments shown?



5C
5 min.
48%

Megan has A quarters and B dimes with a total value of \$1.95, where A and B are both counting numbers. How many different values of A can Megan have?

5D
6 min.
61%

On a standard circular 12-hour clock, the numerals 12 and 6 are opposite each other. On the planet Bajor, they use a circular ten-hour clock with the numerals 1 to 10 equally spaced. What pair of opposite numerals on a Bajorian clock has a sum of 11?

5E
6 min.
17%

On a shopping trip, Gil spends $\frac{1}{3}$ of his money in store A. Then he spends $\frac{1}{3}$ of the money he has left in store B. Finally, he spends his remaining \$12 in store C. How many dollars did he have at the start?

SET 2 OLYMPIAD 1

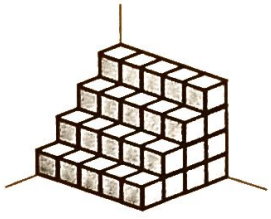
1A
3 min.
80%

What is the value of the following?

$$9 + 91 + 18 + 82 + 27 + 73 + 36 + 64 + 45 + 55$$

1B
4 min.
79%

The stairway at the right is made by placing identical cubes on top of each other. Not all cubes are visible. How many cubes does this stairway contain?



1C
5 min.
59%

Linda wants to buy 20 crayons. *ToyWorld* sells crayons at 4 for 25 cents, and *GameLand* sells crayons at 5 for 30 cents. Which of the two stores sells 20 crayons for less, and by how many cents less?

1D
3 min.
30%

In a class of 26 students, 15 like vanilla ice cream and 16 like chocolate ice cream. However, 3 do not like either flavor. How many students like both vanilla and chocolate ice cream?

1E
5 min.
23%

The average weight of a group of children is 100 pounds. Todd, who weighs 112 pounds, then joins the group. This raises the average weight of the group to 102 pounds. How many children were in the original group?