

SET 1 OLYMPIAD 1

1A.

3

Minutes

What is the value of the following, in simplest terms?

$$(20 \times 24 \times 28 \times 32) \div (10 \times 12 \times 14 \times 16)$$

1B.

5

Minutes

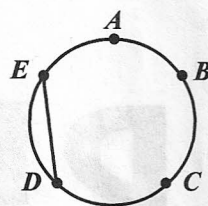
Roni starts with the number 5 and counts by 8s. This results in the sequence 5, 13, 21, 29, 37, and so on. What is the twenty-fifth number in the sequence?

1C.

6

Minutes

A line segment (such as \overline{ED} as shown) that connects any two points of a circle is called a *chord of the circle*. How many different chords, including \overline{ED} , can be drawn using only points A , B , C , D , and E ?
(Note: \overline{ED} is the same as \overline{DE})



1D.

5

Minutes

A represents a counting number. Find the value of A if:

$$\frac{A + A}{A \times A} = \frac{1}{3}$$

1E.

6

Minutes

Ben and Jerry start with the same number of trading cards. After Ben gives 12 of his cards to Jerry, Jerry then has two times as many cards as Ben does. How many cards did Ben have at the start?

SET 1 OLYMPIAD 2

2A.

3

Minutes

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

2B.

4

Minutes

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?

2C.

5

Minutes

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

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

2D.

5

Minutes

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

2E.

6

Minutes

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

Minutes

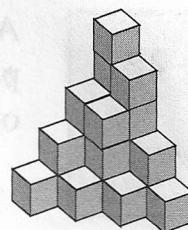
Suppose a standard twelve-hour clock now shows a time of 10:45. What time will the clock show 100 hours from now?

3B.

5

Minutes

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

Minutes

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

Minutes

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

Minutes

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