

**2023 Penny Sikes
Math Tournament
Ciphering Questions**

Round 1 - Practice Question

How many two digit numbers have digits whose sum is 8?

School Code

Answer

Round 1 - Question 1

What is the median of the following set of numbers?

30, 95, 85, 62, 57, 42

School Code

Answer

Round 2 - Question 1

When the factors of 64 are placed in ascending order, what is the product of the 2nd, 4th, and 6th factors?

School Code

Answer

Round 1 - Question 2

Two pitchers, A and B, each contain 48 ounces of juice. Half of the juice in A is poured into B. Then, half of the juice in B is poured into A. Once again, half of the juice in A is poured into B. How many ounces of juice are now in pitcher A?

School Code

Answer

Round 2 - Question 2

A student received scores of 88, 72, 81, 83, 79, and 95 on her quizzes. If she needs a mean score of exactly 80, what is the lowest score she can get on the seventh quiz?

School Code

Answer

Round 1 - Question 3

If $57 + 67 + 77 + 87 + 97 + 107 = 27 + 37 + 47 + 57 + 67 + 77 + N$, what is the value of N ?

School Code

Answer

Round 2 - Question 3

Positive integers a , b , and c satisfy the relations $a \cdot b = 15$, $b \cdot c = 21$, and $a \cdot c = 35$. What is the value of $a \cdot b \cdot c$?

School Code

Answer

Round 1 - Question 4

A rectangular garden plot has a perimeter of 58 feet. If the length of the plot is 16 feet, what is the area of the garden?

School Code



Answer

Round 2 - Question 4

Tim lights a candle every 10 minutes. Every candle burns for exactly 40 minutes. How many candles are burning at exactly 55 minutes after Tim lit the first candle?

School Code



Answer

Round 1 - Question 5

Andy goes to the swimming pool every two days. Erica goes every five days. Dan goes every eight days. Today is Saturday and they are all at the swimming pool. Which day of the week will Andy, Erica, and Dan meet again at the swimming pool?

School Code

Answer

Round 2 - Question 5

Six more than two times what number is 72?

School Code

Answer

Round 1 - Question 6

What is the sum of the greatest common factor and least common multiple of 36 and 90?

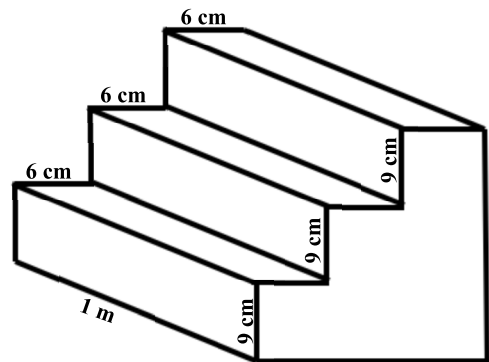
School Code



Answer

Round 2 - Question 6

Find the volume of the figure in cubic centimeters.



School Code



Answer

Round 1 - Question 7

A foot of wire was cut from an 80-inch roll. What percent of the roll remains?

School Code

Answer

Round 2 - Question 7

$\frac{2}{5}$ of a class of 30 students were girls. Then two girls joined the class and eight boys left the class. What fraction of the class do girls now represent?

School Code

Answer

Round 1 - Question 8

If x , y , and z are consecutive prime numbers in increasing order, and $x = 2$ what is the value of $\frac{1}{x} + \frac{1}{y} + \frac{1}{z}$? (Write your answer as a fraction in simplest form.)

School Code

Answer

Round 2 - Question 8

Thomas read a 175-page book from Monday through Friday. Each day, beginning with Tuesday, he read 5 more pages than he read the previous day. How many pages did Thomas read on Monday?

School Code

Answer

Round 1 Answers

1. 59.5
2. 30
3. 180
4. 208
5. Thursday
6. 198
7. 85%
8. 31/30

Practice: 8

Round 2 Answers

1. 512
2. 62
3. 105
4. 4
5. 33
6. 32,400
7. 7/12
8. 25