

**2022 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 product of the mode and range of the following numbers?

27, 19, 24, 22, 24, 21, 28

School Code

Answer

Round 2 - Question 1

Rectangular photographs measuring 4 inches x 7 inches are cut from a piece of paper measuring 1 foot x 2 foot. What is the maximum number of photos that can be cut from this piece of paper?

School Code

Answer

Round 1 - Question 2

Laney plotted a triangle with vertices at the following coordinates:

$(7,2)$, $(0,2)$, and $(7,8)$

What is the area of the triangle that was plotted?

School Code

Answer

Round 2 - Question 2

On Monday, you ran 2 miles. On Tuesday and Wednesday, you ran 4 miles each day. On Thursday and Friday, you ran 2.5 miles each day. If on Saturday and Sunday you ran 6 miles combined, what is the average number of miles per day that you ran for the week?

School Code

Answer

Round 1 - Question 3

Sandra is traveling on a business trip and has to drive to the airport 150 miles away. If she left her house at 10:48 a.m. and travels an average of 60 miles per hour, what time will she arrive at the airport?

School Code

Answer

Round 2 - Question 3

Saniyah was selling boxes of cookies for a fundraiser. $\frac{1}{2}$ of her total boxes sold were Chocolate Chip cookies, $\frac{1}{3}$ were Oatmeal, and $\frac{1}{6}$ of were Lemon. If she sold 5 boxes of Lemon cookies, how many more boxes of Chocolate Chip cookies did she sell than Oatmeal cookies?

School Code

Answer

Round 1 - Question 4

A recipe uses half a cup of sugar to make a dozen cookies. How many cups of sugar would you need to make 42 cookies? (write your answer as a fraction in simplest form)

School Code

Answer

Round 2 - Question 4

A large piece of wire weighs 90 pounds. If the wire weighs 0.3 pounds per foot, how many **yards** long is the wire?

School Code

Answer

Round 1 - Question 5

Your parents are replacing the tile in their rectangular-shaped kitchen. The dimensions of the floor are 12 ft by 15 ft. If the tile costs \$1.45 per square foot, what would be the cost of the tile?

School Code

Answer

Round 2 - Question 5

Amy and two friends have called a taxi to take them to a concert. If total cost of the taxi was \$27.84 and Amy only has \$7.50, how much will each of her friends pay if they agree to split the remainder evenly?

School Code

Answer

Round 1 - Question 6

There are three consecutive, natural numbers less than 10. Their product equals 8 times their sum. What is the middle number?

School Code

Answer

Round 2 - Question 6

On Valentine's Day a group of friends exchanged cards. If each friend gave each other friend one card, and a total of 20 cards were exchanged, how many friends were in the group?

School Code

Answer

Round 1 - Question 7

If two days ago was Monday, what day of the week will be 65 days from today?

School Code

Answer

Round 2 - Question 7

An auditorium is divided into 5 sections.

- Section A has 40 more seats than section E.
- Section B has 20 less seats than section E.
- Section D has half as many seats as section A
- Section C has twice as many seats as section B.
- Section E has 60 seats.

How many seats are there in the auditorium?

School Code

Answer

Round 1 - Question 8

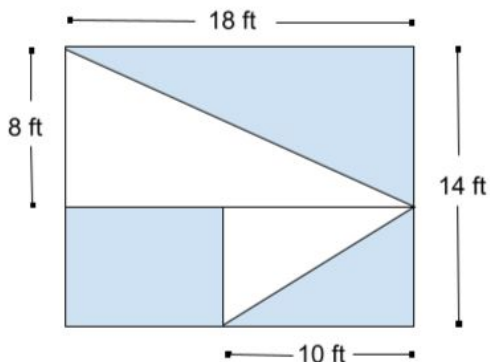
What is the sum of all of the factors of 48, that are greater than 5 and less than 20?

School Code

Answer

Round 2 - Question 8

In the figure below, lengths are measured in feet. What is the total area of the shaded region in ft^2 ?



School Code

Answer

Round 1 Answers

1. 216
2. 21
3. 1:18 pm
4. $\frac{7}{4}$
5. \$261
6. 5
7. Friday
8. 42

Practice: 8

Round 2 Answers

1. 9
2. 3 miles
3. 5
4. 100 yards
5. \$10.17
6. 5
7. 330
8. 150