TEAM NAME_____

14th Annual

Mathletes Challenge

2019

SUDDEN DEATH
Test 1

MULTIPLE-CHOICE ITEMS

1. Subtract: $7\frac{1}{2} - \frac{2}{3}$

A. $2\frac{1}{6}$

B. $3\frac{5}{6}$

C. $6\frac{5}{6}$

D. $7\frac{1}{6}$

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2. Jon rides his bike 0.23 mile. Angie rides her bike 100 times as far as Jon rides. How many miles does Angie ride her bike?

A. 2.3

B. 23

C. 230

D. 2,300

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3. The chart below shows the number of rocking chairs a factory made in the first three months of a year and the number of rocking chairs that the factory shipped for each of those months.

Rocking Chair Factory

Month	Number of Rocking Chairs Made	Number of Rocking Chairs Shipped
January	4,228	2,987
February	3,165	4,000
March	3,784	3,985

How many rocking chairs that were made in the first three months of the year remain to be shipped?

A. 201

B. 205

C. 1,241

D. 2,277

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4. An expression is shown below.

$$5 \times 1\frac{1}{12}$$

Which has the same value as the expression?

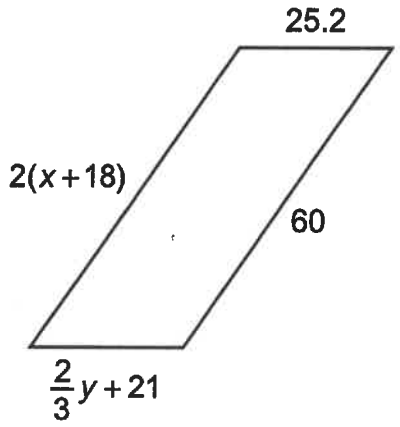
A. $5 + \left(1 + \frac{1}{12}\right)$

B. $(1 + 1 + 1 + 1 + 1) + \left(\frac{1}{12}\right)$

C. $1 + \left(\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}\right)$

D. $(1 + 1 + 1 + 1 + 1) + \left(\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}\right)$

5 A quadrilateral is shown below.



What values of x and y make the quadrilateral a parallelogram?

A. $x = 12$ and $y = 6.3$

B. $x = 21$ and $y = 16.8$

C. $x = 60$ and $y = 25.2$

D. $x = 5.4$ and $y = 58.5$

6. What is the value of the expression $[(5 + 3) \times 6] \div 2$?

A. 11.5

B. 13

C. 14

D. 24

7. The first four terms in a pattern are shown below.

$$\frac{3}{4},\quad 1\frac{1}{4},\quad 1\frac{3}{4},\quad 2\frac{1}{4}$$

The pattern continues. What is the tenth term in the pattern?

A. $5\frac{1}{4}$

B. $5\frac{3}{4}$

C. $10\frac{1}{4}$

D. $10\frac{3}{4}$

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8. During his free time last week, Javon read a book and played outside. At the end of each day, Javon recorded the total number of hours he had spent so far that week doing each activity. The data Javon recorded for the last four days of the week are shown in the table below.

Javon's Free Time

End of Day	Read a Book (hours)	Played Outside (hours)
Wednesday	8	12
Thursday	10	15
Friday	12	18
Saturday	14	21

Based on the patterns in the table, which statement is true?

A. For every hour Javon read a book, he played outside for 1.5 hours.

B. For every hour Javon played outside, he read a book for 1.5 hours.

C. For every hour Javon read a book, he played outside for 3 hours.

D. For every hour Javon played outside, he read a book for 3 hours.

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9 Lee will conduct a survey at his school. He will select a random sample of students at the school to take the survey. Which sample is the **best** random sample for Lee to use?

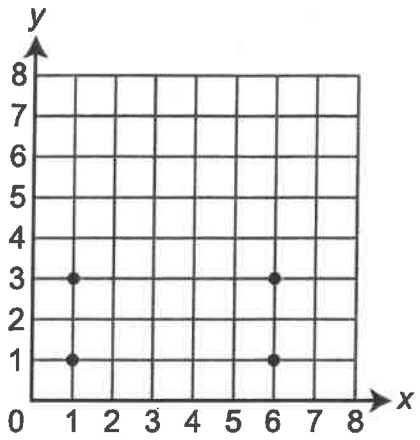
A. every other student in the drama club

B. every fifth student who enters the school

C. every student who rides the same bus as Lee

D. every fourth student in Lee's homeroom class

10. A scientist puts stakes into the ground at the locations of the plotted points shown on the coordinate grid below.



The scientist connects the stakes with string to form a rectangle before digging for objects in the ground. The scientist finds one object inside the rectangle and one object outside the rectangle. At which two locations could the objects have been found?

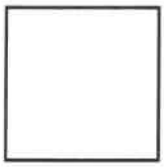
A. (2, 2) and (5, 2)

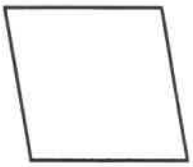
B. (4, 2) and the origin

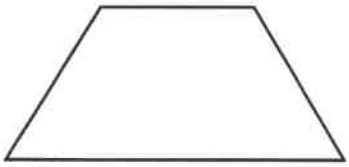
C. (3, 0) and the point with an *x*-coordinate of 1 and a *y*-coordinate of 5

D. (3, 2) and the point with a *y*-coordinate of 2 and an *x*-coordinate of 5

11. Jabari has a quilt made from pieces of fabric that are all parallelograms. Which shape would **not** be found on Jabari's quilt?

A. 

B. 

C. 

D. 

12

As of 2012, there have been 8 players in the history of professional baseball who have each hit more than 600 home runs in his career. There have been over 15,000 professional baseball players throughout the history of professional baseball. Which term **best** describes the likelihood that a randomly chosen professional baseball player has hit more than 600 home runs in his career?

A. impossible

B. unlikely

C. neither unlikely nor likely

D. likely

2019 Mathletes Challenge Sudden Death Test 1 - Answer Key

1. C
2. B
3. B
4. D
5. A
6. D
7. A
8. A
9. B
10. B
11. C
12. B