

Summer AMC 8- Workshop 3

This material is designed for use in the classroom to simulate a **Mock Exam**.

To ensure accurate evaluation results, please **DO NOT** allow children to preview or complete the corresponding exercises in advance.

We will upload the classnotes (as the **answers and solutions**) **after the class** (exam).

Self-Round

- 1 Casey's shop class is making a golf trophy. He has to paint dimples on a golf ball. If it takes him seconds to paint one dimple, how many minutes will he need to do his job? () .

A. 4 B. 6 C. 8 D. 10 E. 12

2 $\frac{10^7}{5 \times 10^4} = ()$.

A. 0.002 B. 0.2 C. 20 D. 200 E. 2000

- 3 What is the sum of the mean, median, and mode of the numbers 2, 3, 0, 3, 1, 4, 0, 3? () .

A. 6.5 B. 7 C. 7.5 D. 8.5 E. 9

- 4 The sum of two prime numbers is 85. What is the product of these two prime numbers? () .

A. 85 B. 91 C. 115 D. 133 E. 166

5

Paul owes Paula **35** cents and has a pocket full of **5**-cent coins, **10**-cent coins, and **25**-cent coins that he can use to pay her. What is the difference between the largest and the smallest number of coins he can use to pay her? () .

- A. 1 B. 2 C. 3 D. 4 E. 5

6 A burger at Ricky C's weighs **120** grams , of which **30** grams are filler. What percent of the burger is not filler? () .

- A. 60% B. 65% C. 70% D. 75% E. 90%

7 How many **4**-digit numbers greater than **1000** are there that use the four digits of **2012**? () .

- A. 6 B. 7 C. 8 D. 9 E. 12

8 A haunted house has six windows. In how many ways can Georgie the Ghost enter the house by one window and leave by a different window? () .

- A. 12 B. 15 C. 18 D. 30 E. 36

In-Class

9 Amy, Bill and Celine are friends with different ages. Exactly one of the following statements is true.

- I. Bill is the oldest.
- II. Amy is not the oldest.
- III. Celine is not the youngest.

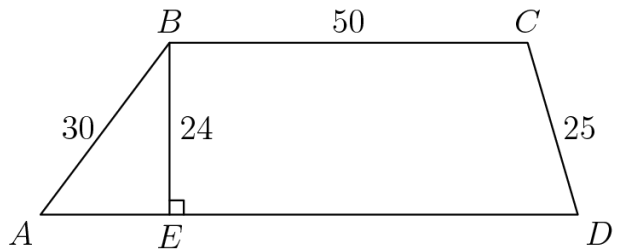
Rank the friends from the oldest to the youngest () .

- A. Bill, Amy, Celine B. Amy, Bill, Celine C. Celine, Amy, Bill D. Celine, Bill, Amy
E. Amy, Celine, Bill

In a mathematics contest with ten problems , a student gains 5 points for a correct answer and loses 2 points for an incorrect answer. If Olivia answered every problem and her score was 29 , how many correct answers did she have? () .

- A. 5 B. 6 C. 7 D. 8 E. 9

- 11 What is the perimeter of trapezoid $ABCD$? () .



- A. 180 B. 188 C. 196 D. 200 E. 204

- 12 Big Al the ape ate 100 delicious yellow bananas from May 1 through May 5. Each day he ate six more bananas than on the previous day. How many delicious bananas did Big Al eat on May 5? () .

- A. 20 B. 22 C. 30 D. 32 E. 34

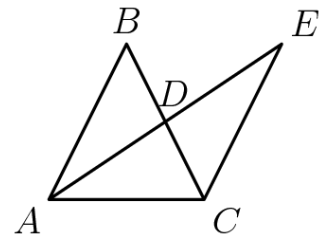
- 13 How many two-digit numbers have digits whose sum is a perfect square? () .

- A. 13 B. 16 C. 17 D. 18 E. 19

- 14 Let a , b and c be numbers with $0 < a < b < c$. Which of the following is impossible? () .

- A. $a + c < b$ B. $a \cdot b < c$ C. $a + b < c$ D. $a \cdot c < b$
 E. $\frac{b}{c} = a$

- 15 Triangle ABC is an isosceles triangle with $\overline{AB} = \overline{BC}$. Point D is the midpoint of both \overline{BC} and \overline{AE} , and \overline{CE} is 11 units long. Triangle ABD is congruent to triangle ECD . What is the length of \overline{BD} ? () .



- A. 4 B. 4.5 C. 5 D. 5.5 E. 6

16 If $3^p + 3^4 = 90$, $2^r + 44 = 76$, and $5^3 + 6^s = 1421$, what is the product of p , r , and s ? () .

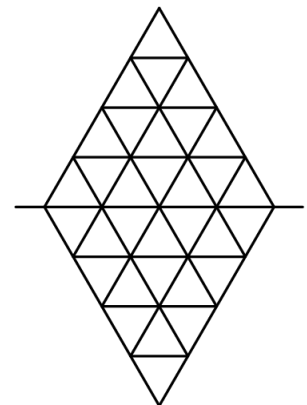
- A. 27 B. 40 C. 50 D. 70 E. 90

17 The students in Mr. Neatkin's class took a penmanship test. Two-thirds of the boys and $\frac{3}{4}$ of the girls passed the test, and an equal number of boys and girls passed the test. What is the minimum possible number of students in the class? () .

- A. 12 B. 17 C. 24 D. 27 E. 36

18 Each half of this figure is composed of 3 red triangles, 5 blue triangles and 8 white triangles.

When the upper half is folded down over the centerline, 2 pairs of red triangles coincide, as do 3 pairs of blue triangles. There are 2 red-white pairs. How many white pairs coincide? () .



- A. 4 B. 5 C. 6 D. 7 E. 9