AMC 8 Mock Test

1. Which of the following values is the largest?

(A) $2+0+2+5$
(B) $2\times 0+2+5$
(C) $2+0\times 2+5$
(D) $2+0+2\times 5$
(E) $2\times 0\times 2\times 5$

2. Priya has a 3×3 square. She painted each cell with either red, or blue, or green. Red is her most favorite color so she used it more than any of the other two. Green is her least favorite color so she used it less than any of the other two. In the picture you can see the colors of the 8 cells. What is the color of the last cell?

R	B	G
B	R	R
R	?	G

(A) Red
(B) Blue
(C) Green
(D) Multiple options work
(E) None of the options work

3. What is the value of the expression $\sqrt{81\sqrt{27\sqrt{9}}}$?

(A) 9 (B) $9\sqrt{3}$ (C) 27 (D) $27\sqrt{3}$ (E) 81

4. The sum of the 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. Mr. Gray wrote a number on the blackboard. He asked Will to multiply this number by 2 an then subtract 12 from a product. But Will got confused and instead divided the given number by 2 and then added 12 to a quotient. But nevertheless he got a correct answer! What is the blackboard number?

(A) 8 (B) 10 (C) 12 (D) 16 (E) 20

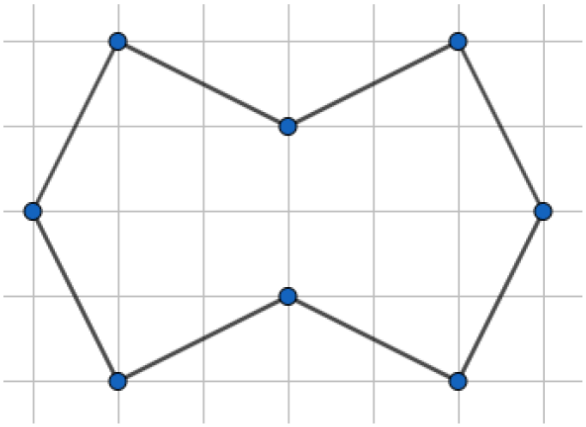
6. If the degree measures of the angles of a triangle are in a ratio 2 : 3 : 4, what is the degree measure of the largest angle of this triangle?

(A) 60 (B) 80 (C) 90 (D) 105 (E) 120

7. Abraham has 15 coins and each coin is either a nickel (5 cent coin) or a dime (10 cent coin). His coins in total are worth one dollar. How many dimes does he have?

(A) 5 (B) 6 (C) 8 (D) 10 (E) 12

8. Meredith drew an octagon on 1 cm × 1 cm graph paper. What is the area of this octagon in cm^2?

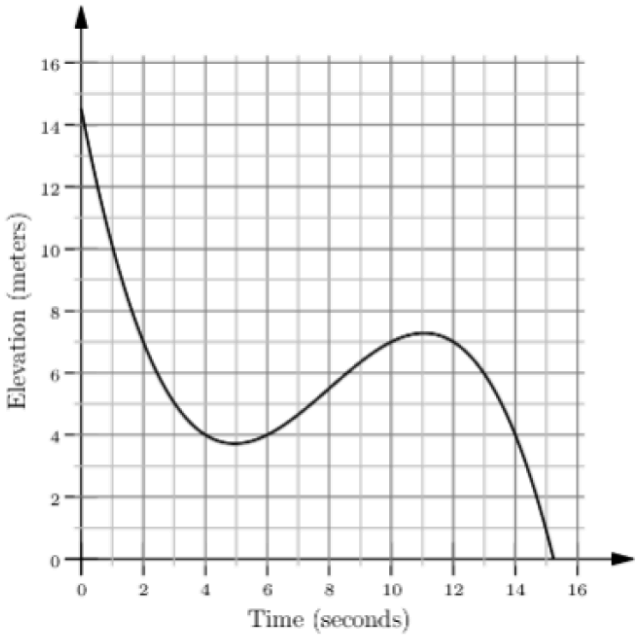


(A) 10 (B) 12 (C) 14 (D) 16 (E) 20

9. There are 30 students in a class. Each of them attends at least one of the two clubs: the soccer club and the tennis club. There are 8 students who attend both clubs. What is the total number of students in the soccer club if it is equal to the total number of students in the tennis club?

(A) 10 (B) 11 (C) 15 (D) 18 (E) 19

10. Malaika is skiing on a mountain. The graph below shows her elevation, in meters, above the base of the mountain as she skis along a trail. In total, how many seconds does she spend at an elevation between 4 and 7 meters?

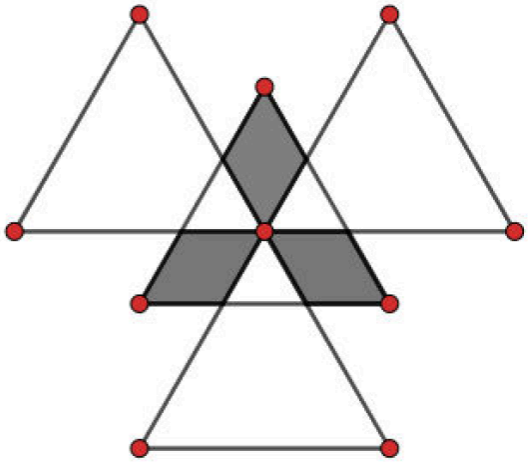


(A) 6 (B) 8 (C) 10 (D) 12 (E) 14

11. Every day in the morning Robert does several push ups. He noticed that during the first four days of this week he did an average of 12 push *ups* per day and decided to intensify his training. So for the remaining three days of this week he did an average of 19 push *ups* per day. What is this week's average amount of push *ups* per day?

(A) 13 (B) 14 (C) 15 (D) 16 (E) 17

12. The shape in the picture consists of four congruent overlapping equilateral triangles. Each of these four triangles has an area of 54. Find the total area of shaded shapes.



(A) 12 (B) 18 (C) 24 (D) 36 (E) 48

13. There is a sausage with several colored rings on it. If you cut along the red rings, you get 5 pieces. If instead you cut along the yellow rings, you get 7 pieces. And if instead you cut along the green rings, you get 11 pieces. How many pieces of sausage will you get if you cut along the rings of all three colors?

(A) 21 (B) 22 (C) 23 (D) 24 (E) 25

14. In a sequence of integers each number (except for the first two) is equal to the sum of the previous two numbers. The first number in this sequence is 2 and the seventh number in this sequence is 50. What is the second number in this sequence?

(A) 1 (B) 2 (C) 3 (D) 4 (E) 5

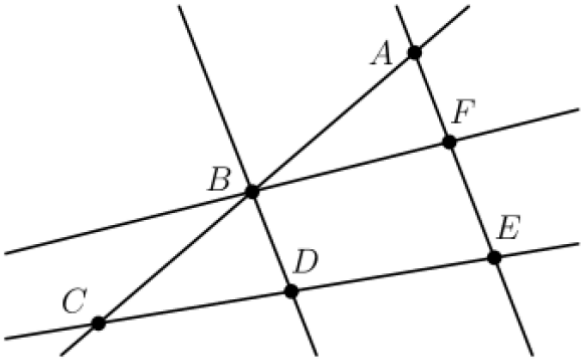
15. Peter has a six sided dice. Three faces of this dice are marked with the letter R, two faces are marked with the letter S, and one face is marked with the letter M. Peter rolls his dice three times and writes down the letters he gets. What is the probability that he will get a result RSM?

(A) $\frac{1}{216}$ (B) $\frac{1}{36}$ (C) $\frac{1}{11}$ (D) $\frac{1}{3}$ (E) $\frac{1}{2}$

16. Mr. Green wrote a 9-digit number 275803972 on the blackboard. He then asked Iren to erase 4 digits from this number to get the largest possible 5-digit number. (Iren can erase digits but she can't change the order of the remaining digits.) What is the sum of the digits of Iren's result?

(A) 25 (B) 26 (C) 29 (D) 33 (E) 36

17. Each of the points A,B,C,D,E, and F in the figure below represents a different digit from 1 to 6. Each of the five lines shown passes through some of these points. The digits along each line are added to produce five sums, one for each line. The total of the five sums is 47. What is the digit represented by B?

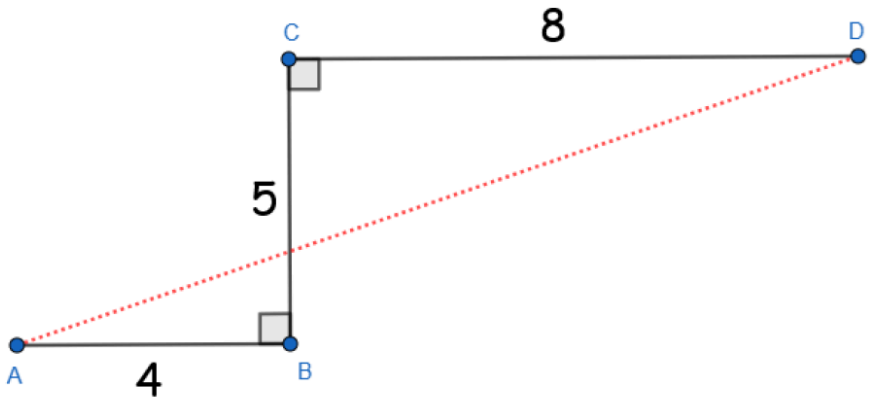


(A) 1 (B) 2 (C) 3 (D) 4 (E) 5

18. On Sunday Crista put several books with a blue binding on an empty shelf. On Monday between every two adjacent books, Crista put a book with a green binding. On Tuesday between every two adjacent books, Crista put a book with a yellow binding. Finally, on Wednesday between every two adjacent books, Crista put a book with a red binding. Now there are 49 books on a shelf. How many books with a blue binding are there?

(A) 6 (B) 7 (C) 8 (D) 13 (E) 25

19. Polyline ABCD consists of three segments and has two right angles. |AB| = 4, |BC| = 5, |CD| = 8. Find the distance between points A and D.



(A) 13 (B) 14 (C) 15 (D) 16 (E) 17

20. Srinivasa multiplied all odd two-digit numbers that are not multiples of 5. What is the last digit of the product?

(A) 1 (B) 3 (C) 5 (D) 7 (E) 9

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21. Caleb stands at the beginning of the platform and sees an approaching train. When the front of the train passes by him he starts to run along the platform and reaches the end of the platform exactly when the end of the train passes by him. (Caleb and the train move in the same direction.) Caleb's speed is 5 mph, train's speed is 30 mph. What is the length of the platform if the length of the train is 1 mile?

(A) $\frac{1}{7}$ mile (B) $\frac{1}{6}$ mile (C) $\frac{1}{5}$ mile (C) $\frac{1}{4}$ mile (D) $\frac{1}{2}$ mile

22. The language of aliens from the planet Umbaarig. Has 4 consonants and 3 vowels. Grambi forgot a 4-letter password to his email and remembers only that it consists of 1 consonant and 3 vowels. He decided to guess the password randomly. What is the probability that he will be correct on the first attempt?

(A) $\frac{1}{576}$ (B) $\frac{1}{432}$ (C) $\frac{1}{324}$ (D) $\frac{1}{192}$ (E) $\frac{1}{108}$.

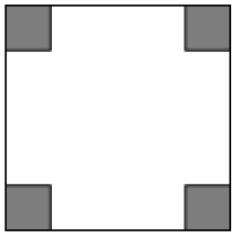
23. One day the Beverage Barn sold 252 cans of soda to 100 customers, and every customer bought at least one can of soda. What is the maximum possible median number of cans of soda bought per customer on that day?

(A) 2.5 (B) 3.0 (C) 3.5 (D) 4.0 (E) 4.5

24. Planet Sartblex is inhabited by lunar monkeys. A lunar monkey becomes happy if it eats 3 **different** fruits. Mary has 20 oranges, 30 pears, 40 apples, and 50 bananas. What is the greatest possible number of lunar monkeys that Mary can make happy?

(A) 30 (B) 40 (C) 44 (D) 45 (E) 46

25. Four 1-inch squares are cut from the corners of this 5-inch square. What is the area in square inches of the largest square that can be fitted into the remaining space?



(A) 9 (B) $12\frac{1}{2}$ (C) 15 (D) $15\frac{1}{2}$ (E) 17