



# 2008 AMC 8

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**Question 1**

Not yet answered

Points out of 1

Susan had 50 dollars to spend at the carnival. She spent 12 dollars on food and twice as much on rides. How many dollars did she have left to spend?

(A) 12      (B) 14      (C) 26      (D) 38      (E) 50

Select one:

- A
- B
- C
- D
- E

**Question 2**

Not yet answered

Points out of 1

The ten-letter code BEST OF LUCK represents the ten digits 0 – 9, in order. What 4-digit number is represented by the code word CLUE?

(A) 8671      (B) 8672      (C) 9781      (D) 9782      (E) 9872

Select one:

- A
- B
- C
- D
- E

**Question 3**

Not yet answered

Points out of 1

If February is a month that contains Friday the 13<sup>th</sup>, what day of the week is February 1<sup>st</sup>?

(A) Sunday      (B) Monday      (C) Wednesday      (D) Thursday      (E) Saturday

Select one:

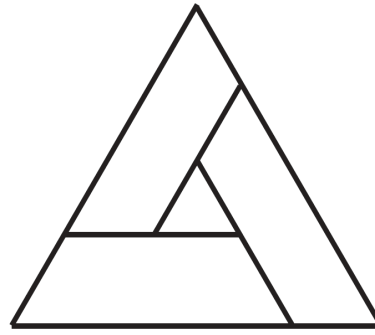
- A
- B
- C
- D
- E

**Question 4**

Not yet answered

Points out of 1

In the figure, the outer equilateral triangle has area 16, the inner equilateral triangle has area 1, and the three trapezoids are congruent.



What is the area of one of the trapezoids?

- (A) 3      (B) 4      (C) 5      (D) 6      (E) 7

Select one:

- A  
 B  
 C  
 D  
 E

**Question 5**

Not yet answered

Points out of 1

Barney Schwinn notices that the odometer on his bicycle reads 1441, a palindrome, because it reads the same forward and backward. After riding 4 more hours that day and 6 the next, he notices that the odometer shows another palindrome, 1661. What was his average speed in miles per hour?

- (A) 15      (B) 16      (C) 18      (D) 20      (E) 22

Select one:

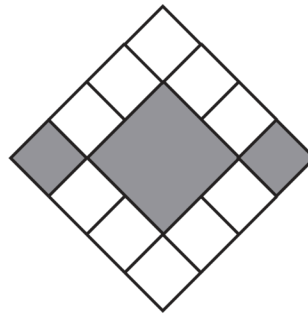
- A  
 B  
 C  
 D  
 E

**Question 6**

Not yet answered

Points out of 1

In the figure, what is the ratio of the area of the gray squares to the area of the white squares?



- (A) 3 : 10    (B) 3 : 8    (C) 3 : 7    (D) 3 : 5    (E) 1 : 1

Select one:

- A  
 B  
 C  
 D  
 E

**Question 7**

Not yet answered

Points out of 1

If  $\frac{3}{5} = \frac{M}{45} = \frac{60}{N}$ , what is  $M + N$ ?

- (A) 27    (B) 29    (C) 45    (D) 105    (E) 127

Select one:

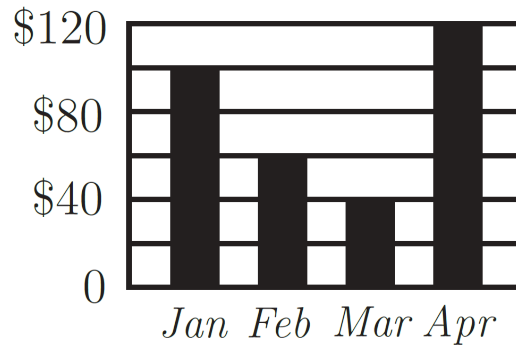
- A  
 B  
 C  
 D  
 E

**Question 8**

Not yet answered

Points out of 1

Candy sales from the Boosters Club from January through April are shown.



What were the average sales per month in dollars?

- (A) 60      (B) 70      (C) 75      (D) 80      (E) 85

Select one:

- A  
 B  
 C  
 D  
 E

**Question 9**

Not yet answered

Points out of 1

In 2005 Tycoon Tammy invested 100 dollars for two years. During the the first year her investment suffered a 15% loss, but during the second year the remaining investment showed a 20% gain. Over the two-year period, what was the change in Tammy's investment?

- (A) 5% loss      (B) 2% loss      (C) 1% gain      (D) 2% gain      (E) 5% gain

Select one:

- A  
 B  
 C  
 D  
 E

**Question 10**

Not yet answered

Points out of 1

The average age of the 6 people in Room A is 40. The average age of the 4 people in Room B is 25. If the two groups are combined, what is the average age of all the people?

(A) 32.5    (B) 33    (C) 33.5    (D) 34    (E) 35

Select one:

- A
- B
- C
- D
- E

**Question 11**

Not yet answered

Points out of 1

Each of the 39 students in the eighth grade at Lincoln Middle School has one dog or one cat or both a dog and a cat. Twenty students have a dog and 26 students have a cat. How many students have both a dog and a cat?

(A) 7    (B) 13    (C) 19    (D) 39    (E) 46

Select one:

- A
- B
- C
- D
- E

**Question 12**

Not yet answered

Points out of 1

A ball is dropped from a height of 3 meters. On its first bounce it rises to a height of 2 meters. It keeps falling and bouncing to  $\frac{2}{3}$  of the height it reached in the previous bounce. On which bounce will it not rise to a height of 0.5 meters?

(A) 3    (B) 4    (C) 5    (D) 6    (E) 7

Select one:

- A
- B
- C
- D
- E

**Question 13**

Not yet answered

Points out of 1

Mr. Harman needs to know the combined weight in pounds of three boxes he wants to mail. However, the only available scale is not accurate for weights less than 100 pounds or more than 150 pounds. So the boxes are weighed in pairs in every possible way. The results are 122, 125 and 127 pounds. What is the combined weight in pounds of the three boxes?

(A) 160      (B) 170      (C) 187      (D) 195      (E) 354

Select one:

- A
- B
- C
- D
- E

**Question 14**

Not yet answered

Points out of 1

Three A's, three B's, and three C's are placed in the nine spaces so that each row and column contain one of each letter.

A		

If A is placed in the upper left corner, how many arrangements are possible?

(A) 2      (B) 3      (C) 4      (D) 5      (E) 6

Select one:

- A
- B
- C
- D
- E

**Question 15**

Not yet answered

Points out of 1

In Theresa's first 8 basketball games, she scored 7, 4, 3, 6, 8, 3, 1 and 5 points. In her ninth game, she scored fewer than 10 points and her points-per-game average for the nine games was an integer. Similarly in her tenth game, she scored fewer than 10 points and her points-per-game average for the 10 games was also an integer. What is the product of the number of points she scored in the ninth and tenth games?

- (A) 35    (B) 40    (C) 48    (D) 56    (E) 72

Select one:

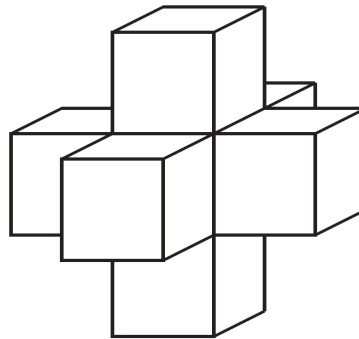
- A  
 B  
 C  
 D  
 E

**Question 16**

Not yet answered

Points out of 1

A shape is created by joining seven unit cubes, as shown.



What is the ratio of the volume in cubic units to the surface area in square units?

- (A) 1 : 6    (B) 7 : 36    (C) 1 : 5    (D) 7 : 30    (E) 6 : 25

Select one:

- A  
 B  
 C  
 D  
 E



**Question 17**

Not yet answered

Points out of 1

Ms. Osborne asks each student in her class to draw a rectangle with integer side lengths and a perimeter of 50 units. All of her students calculate the area of the rectangle they draw. What is the difference between the largest and smallest possible areas of the rectangles?

(A) 76      (B) 120      (C) 128      (D) 132      (E) 136

Select one:

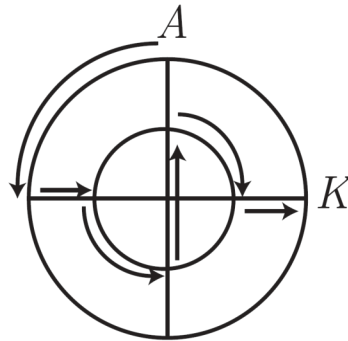
- A
- B
- C
- D
- E

**Question 18**

Not yet answered

Points out of 1

Two circles that share the same center have radii 10 meters and 20 meters. An aardvark runs along the path shown, starting at  $A$  and ending at  $K$ .



How many meters does the aardvark run?

(A)  $10\pi + 20$       (B)  $10\pi + 30$       (C)  $10\pi + 40$       (D)  $20\pi + 20$   
(E)  $20\pi + 40$

Select one:

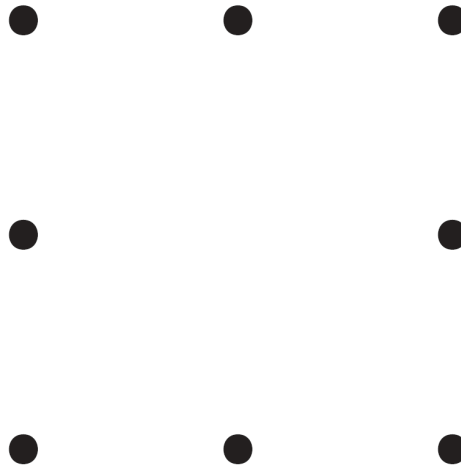
- A
- B
- C
- D
- E

**Question 19**

Not yet answered

Points out of 1

Eight points are spaced around at intervals of one unit around a  $2 \times 2$  square, as shown. Two of the 8 points are chosen at random.



What is the probability that the two points are one unit apart?

- (A)  $\frac{1}{4}$     (B)  $\frac{2}{7}$     (C)  $\frac{4}{11}$     (D)  $\frac{1}{2}$     (E)  $\frac{4}{7}$

Select one:

- A  
 B  
 C  
 D  
 E

**Question 20**

Not yet answered

Points out of 1

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

Select one:

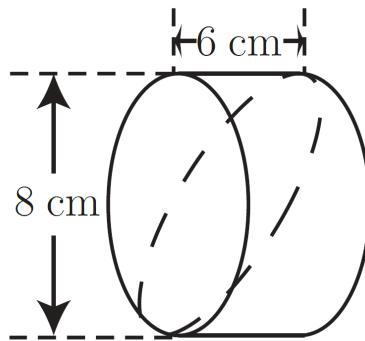
- A  
 B  
 C  
 D  
 E

**Question 21**

Not yet answered

Points out of 1

Jerry cuts a wedge from a 6-cm cylinder of bologna as shown by the dashed curve.



Which answer choice is closest to the volume of his wedge in cubic centimeters?

- (A) 48      (B) 75      (C) 151      (D) 192      (E) 603

Select one:

- A  
 B  
 C  
 D  
 E

**Question 22**

Not yet answered

Points out of 1

For how many positive integer values of  $n$  are both  $\frac{n}{3}$  and  $3n$  three-digit whole numbers?

- (A) 12      (B) 21      (C) 27      (D) 33      (E) 34

Select one:

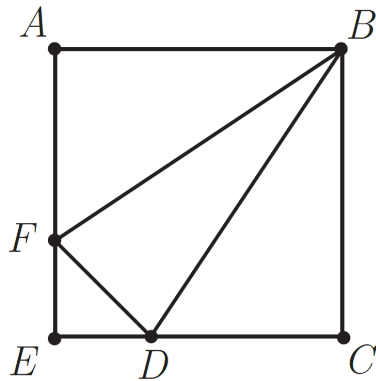
- A  
 B  
 C  
 D  
 E

**Question 23**

Not yet answered

Points out of 1

In square  $ABCE$ ,  $AF = 2FE$  and  $CD = 2DE$ .



What is the ratio of the area of  $\triangle BFD$  to the area of square  $ABCE$ ?

- (A)  $\frac{1}{6}$     (B)  $\frac{2}{9}$     (C)  $\frac{5}{18}$     (D)  $\frac{1}{3}$     (E)  $\frac{7}{20}$

Select one:

- A  
 B  
 C  
 D  
 E

**Question 24**

Not yet answered

Points out of 1

Ten tiles numbered 1 through 10 are turned face down. One tile is turned up at random, and a die is rolled. What is the probability that the product of the numbers on the tile and the die will be a square?

- (A)  $\frac{1}{10}$     (B)  $\frac{1}{6}$     (C)  $\frac{11}{60}$     (D)  $\frac{1}{5}$     (E)  $\frac{7}{30}$

Select one:

- A  
 B  
 C  
 D  
 E

**Question 25**

Not yet answered

Points out of 1

Margie's winning art design is shown. The smallest circle has radius 2 inches, with each successive circle's radius increasing by 2 inches.



Approximately what percent of the design is black?

- (A) 42      (B) 44      (C) 45      (D) 46      (E) 48

Select one:

- A
- B
- C
- D
- E