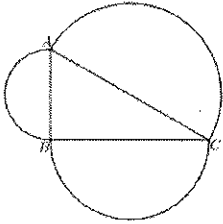


AMC 8 Practice

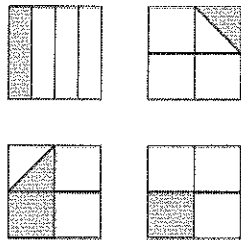
Angle ABC of $\triangle ABC$ is a right angle. The sides of $\triangle ABC$ are the diameters of semicircles as shown. The area of the semicircle on \overline{AB} equals 8π , and the arc of the semicircle on \overline{AC} has length 8.5π . What is the radius of the semicircle on \overline{BC} ?



- (A) 7 (B) 7.5 (C) 8 (D) 8.5 (E) 9

2.

Each of the following four large congruent squares is subdivided into combinations of congruent triangles or rectangles and is partially shaded. What percent of the total area is partially shaded?



- (A) $12\frac{1}{2}$ (B) 20 (C) 25 (D) $33\frac{1}{3}$ (E) 37

3.

If $3^p + 3^4 = 90$, $2^r + 44 = 76$, and $5^s + 6^8 = 1421$, what is the product of p , r , and s ?

- (A) 27 (B) 40 (C) 50 (D) 70 (E) 90

4. What is the ratio of the least common multiple of 180 and 594 to the greatest common factor of 180 and 594?

- (A) 110 (B) 165 (C) 330 (D) 625 (E) 660

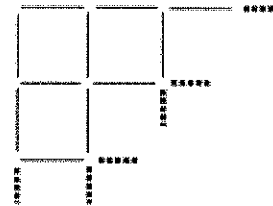
5.

Danica wants to arrange her model cars in rows with exactly 6 cars in each row. She now has 23 model cars. What is the smallest number of additional cars she must buy in order to be able to arrange her cars in this way?

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

6.

Toothpicks are used to make a grid that is 60 toothpick long and 32 toothpicks high. How many toothpicks are used altogether?



- (A) 1920 (B) 1952 (C) 1980 (D) 2013 (E) 3932

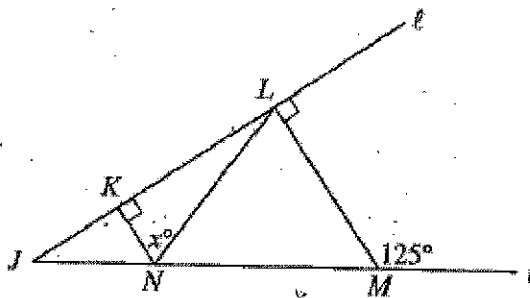
SAT Practice Problems

1. For how many integer values of x will $\frac{7}{x}$ be greater than $\frac{1}{4}$ and less than $\frac{1}{3}$.

- A. 6
 B. 7
 C. 12
 D. 28

2. The median of a set of 9 consecutive integer is 42. What is the greatest of these 9 integers?

3.



In the figure above, $\overline{KN} \perp \overline{JL}$ and $\overline{LM} \perp \overline{JL}$. If the lengths of \overline{LN} and \overline{LM} are equal, what is the value of x ?

4.

In the xy -coordinate plane, the distance between point $B(10, 18)$ and point $A(x, 3)$ is 17. What is one possible value of x ?

5.

If $a + 2b$ is equal to 125 percent of $4b$, what is the value of $\frac{a}{b}$?