

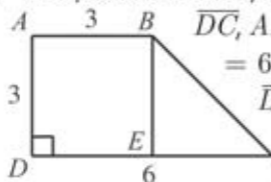
# SAMPLE QUESTIONS

## 2007 AMC 8

3. What is the sum of the two smallest prime factors of 250?

(A) 2 (B) 5 (C) 7 (D) 10 (E) 12

8. In trapezoid  $ABCD$ ,  $\overline{AD}$  is perpendicular to  $\overline{DC}$ ,  $AD = AB = 3$ , and  $DC = 6$ . In addition,  $E$  is on  $\overline{DC}$ , and  $\overline{BE}$  is parallel to  $\overline{AD}$ . Find the area of  $\triangle BEC$ .



(A) 3 (B) 4.5 (C) 6 (D) 9 (E) 18

14. The base of isosceles  $\triangle ABC$  is 24 and its area is 60. What is the length of one of the congruent sides?

(A) 5 (B) 8 (C) 13 (D) 14 (E) 18

17. A mixture of 30 liters of paint is 25% red tint, 30% yellow tint, and 45% water. Five liters of yellow tint are added to the original mixture. What is the percent of yellow tint in the new mixture?

(A) 25 (B) 35 (C) 40 (D) 45 (E) 50

24. A bag contains four pieces of paper, each labeled with one of the digits 1, 2, 3, or 4, with no repeats. Three of these pieces are drawn one at a time without replacement, to construct a three-digit number. What is the probability that the three-digit number is a multiple of 3?

(A)  $\frac{1}{4}$  (B)  $\frac{1}{3}$  (C)  $\frac{1}{2}$  (D)  $\frac{2}{3}$  (E)  $\frac{3}{4}$