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RATIO

- 2002A 7. If an arc of 45° on circle A has the same length as an arc of 30° on circle B , then the ratio of the area of circle A to the area of circle B is
- (A) $\frac{4}{9}$ (B) $\frac{2}{3}$ (C) $\frac{5}{6}$ (D) $\frac{3}{2}$ (E) $\frac{9}{4}$
- 2005B 7. A circle is inscribed in a square, then a square is inscribed in this circle, and finally, a circle is inscribed in this square. What is the ratio of the area of the smaller circle to the area of the larger square?
- (A) $\frac{\pi}{16}$ (B) $\frac{\pi}{8}$ (C) $\frac{3\pi}{16}$ (D) $\frac{\pi}{4}$ (E) $\frac{\pi}{2}$
- 2015A 6. The sum of two positive numbers is 5 times their difference. What is the ratio of the larger number to the smaller?
- (A) $\frac{5}{4}$ (B) $\frac{3}{2}$ (C) $\frac{9}{5}$ (D) 2 (E) $\frac{5}{2}$

- 2016B 7. The ratio of the measures of two acute angles is $5 : 4$, and the complement of one of these two angles is twice as large as the complement of the other. What is the sum of the degree measures of the two angles?
- (A) 75 (B) 90 (C) 135 (D) 150 (E) 270
- 2015A 8. Two years ago Pete was three times as old as his cousin Claire. Two years before that, Pete was four times as old as Claire. In how many years will the ratio of their ages be $2 : 1$?
- (A) 2 (B) 4 (C) 5 (D) 6 (E) 8
- 2011B 10. Consider the set of numbers $\{1, 10, 10^2, 10^3, \dots, 10^{10}\}$. The ratio of the largest element of the set to the sum of the other ten elements of the set is closest to which integer?
- (A) 1 (B) 9 (C) 10 (D) 11 (E) 101