

## Team Relay 2010

**Part 1:** The circumference of an over-inflated ball used by the College of Charleston basketball team is 30 inches. Find  $A$  where  $A$  is the radius of the basketball in inches. (Write exact answer in lowest terms.)

**Part 2:** Find  $B$  where  $B = \sin\left(\frac{10}{3A} + \frac{4\pi}{9}\right)$  and the angle is given in radians.

**Part 3:** Find  $C$ , if  $C = \frac{B^3}{2 - B^2}$ . Simplify  $C$ .

**Part 4:** Find  $D$ , if  $D = \log_3(1000 \cdot C^3)$ .

$$A = \frac{15}{\pi} \quad B = \frac{\sqrt{3}}{2} \quad C = \frac{3\sqrt{3}}{10} \quad D = \frac{9}{2}$$