

I. The vertices of an equilateral triangle are labelled X , Y and Z . The points X , Y and Z lie on a circle of circumference 10 units. Let P and A be the numerical values of the triangle's perimeter and area, respectively. Which of the following is true?

- (a) $\frac{A}{P} = \frac{5}{4\pi}$; (b) $P < A$; (c) $\frac{P}{A} = \frac{10}{3\pi}$; (d) P^2 is rational.