

**F.** Let

$$T = \left( \int_{-\pi/2}^{\pi/2} \cos x \, dx \right) \times \left( \int_{\pi}^{2\pi} \sin x \, dx \right) \times \left( \int_0^{\pi/8} \frac{dx}{\cos 3x} \right).$$

Which of the following is true?

- (a)  $T = 0$ ;      (b)  $T < 0$ ;      (c)  $T > 0$ ;      (d)  $T$  is not defined.