1. \( \int_{-1}^{1} |x^3 - x| \, dx = \)

(a) 1  
(b) \( \frac{1}{2} \)  
(c) \( \pi \)  
(d) \( \sqrt{2} \)  
(e) 1.5

2. The volume of solid generated by revolving the region enclosed by \( x = y^2 \) and \( x = y \) about the line \( y = -1 \) is

(a) \( \frac{\pi}{2} \)  
(b) 3\( \pi \)  
(c) 1 - \( \pi \)  
(d) 1  
(e) \( \frac{3\pi}{4} \)
1. The area of the region enclosed by $x = y^2$ and $x = y + 2$ is equal to

(a) $\pi/2$
(b) $9/2$
(c) $1/2$
(d) $2\pi$
(e) 3

2. $\int_{0}^{\pi/2} \cos x \sin (\sin x) dx =$

(a) $\sin 1$
(b) $\sqrt{3}$
(c) $1/2$
(d) $1 - \pi$
(e) $1 - \cos 1$
1. The area of the region enclosed by the graphs of \( y = 6 - x^2 \) and \( y = -2x + 3 \) is equal to

- (a) \( 2 \)
- (b) \( \sqrt{3} \)
- (c) \( 5 \)
- (d) \( \frac{2}{3} \)
- (e) \( \frac{32}{3} \)

2. The volume of the solid generated by revolving the region enclosed by the curves \( x = 1 - y^2, x = 2 + y^2, y = -1, y = 1 \) about y-axis is

- (a) \( \frac{\pi}{2} \)
- (b) \( 10\pi \)
- (c) \( 3\pi \)
- (d) \( 2 \)
- (e) \( 1 - \pi \)
1. \[ \int_{0}^{1} \frac{x}{1+x^4} \, dx = \]

   (a) 3\(\pi\)
   (b) \(\frac{4}{9}\)
   (c) 1
   (d) \(\frac{\pi}{8}\)
   (e) \(\pi\)

2. \[ \int_{0}^{2} (1 - x^2) \, dx = \]

   (a) 2\(\pi\)
   (b) \(\frac{2}{5}\)
   (c) 1
   (d) -1
   (e) \(\frac{2}{3}\)