$$\arcsin\left(\frac{\sqrt{3}}{2}\right) =$$

(a)
$$\frac{\pi}{6}$$

(b)
$$\frac{\pi}{4}$$

(c)
$$\frac{\pi}{3}$$

(d)
$$\frac{7\pi}{3}$$

$$\arcsin\left(-\frac{1}{2}\right) =$$

(a)
$$\frac{5\pi}{6}$$

(b)
$$\frac{\pi}{3}$$

(c)
$$\frac{77}{6}$$

(d)
$$-\frac{\pi}{3}$$

(e)
$$-\frac{\pi}{6}$$

Evaluate the following

1.
$$\frac{d}{dx} \arcsin(\ln(x))$$

$$5. \int \frac{e^x}{1 + e^{2x}} dx$$

2.
$$\frac{d}{dx} \arctan(\sec(x^3))$$

6.
$$\int_0^1 \frac{e^x}{1 + e^x} dx$$

3.
$$\int \frac{x+3}{\sqrt{1-(x^2+6x)^2}} dx$$

$$7. \int e^x \sqrt{1+e^x} \ dx$$

$$4. \int \frac{\sin(4x)}{1+\cos(4x)^2} dx$$

$$8. \int x e^x dx$$