

DO NOT use a calculator to evaluate the following integrals. Rather, you should use your knowledge of graph transformations, area, and the given fact below to answer these problems.

$$\text{Given: } \int_0^{\pi} \sin x dx = 2$$

1. $\int_{-\pi}^{\pi} \sin x dx$

2. $\int_0^{\pi} \sin(2x) dx$

3. $\int_0^{\pi} (\sin x + 1) dx$

4. $\int_{-\pi}^0 \sin(x + \pi) dx$

5. $\int_{-\pi}^{\pi} |\sin x| dx$

6. $\int_0^{\pi} -\sin x dx$

7. $\int_0^1 \sin^{-1} x dx$

8. $\int_0^{\frac{\pi}{2}} \cos x dx$