

Evaluate the following integrals by sketching the appropriate region.

1.  $\int_0^4 2x \, dx$

4.  $\int_0^3 -x + 2 \, dx$

7.  $\int_0^\pi \cos(x) \, dx$

2.  $\int_{-1}^0 2x \, dx$

5.  $\int_{-5}^2 3x + 6 \, dx$

8.  $\int_{-2}^2 \sqrt{4 - x^2} \, dx$

3.  $\int_{-1}^4 2x \, dx$

6.  $\int_{-1}^1 x^3 \, dx$

9.  $\int_0^t 2x \, dx$