For each definite integral:

(a) Sketch the corresponding region

(b) Evaluate the integral by finding the signed area of the region

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

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

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

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

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

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

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

8. $\int_0^t 3\,dx$

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