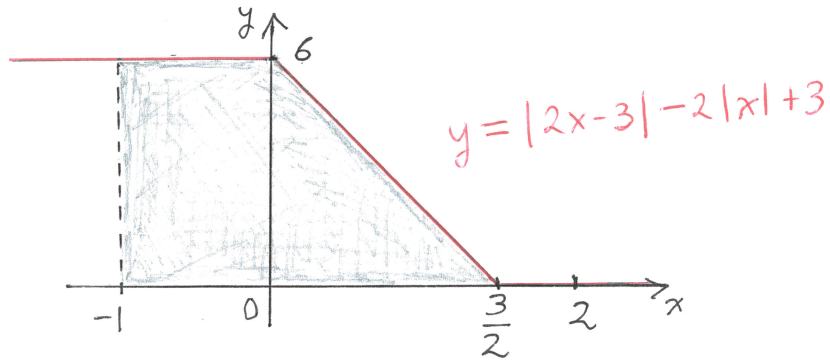


4. Evaluate the following integrals:

$$\text{a. } \int_{-1}^2 (|2x-3| - 2|x| + 3) dx = 6 \cdot 1 + \frac{1}{2} \cdot 6 \cdot \frac{3}{2} = \frac{21}{2}$$



$$\text{b. } \int \frac{\tan \theta \sec^2 \theta}{(1 - \tan^2 \theta)^2} d\theta = \frac{1}{2} \int du = \frac{1}{2} u + C = \frac{1}{2 \cdot (1 - \tan^2 \theta)} + C$$

$$u = \frac{1}{1 - \tan^2 \theta}$$

$$du = -\frac{1}{(1 - \tan^2 \theta)^2} \cdot (-2 \tan \theta) \cdot \sec^2 \theta d\theta$$