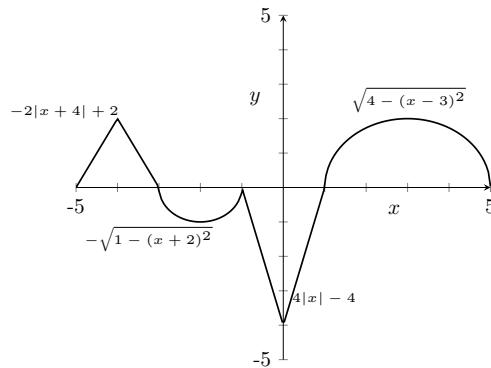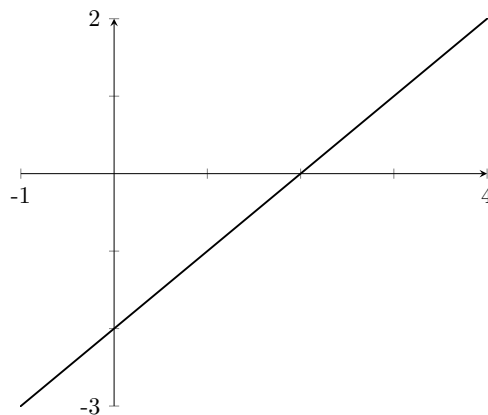**Due by 19 November for timely completion credit**

1. Consider the function f whose graph is comprised of triangles and semicircles, drawn below. Compute $\int_{-5}^{5} f(x)\mathrm{d}x$ using the fact that the area of a triangle is $\frac{1}{2}$(base)(height) and the area of a (full) circle is π(radius)^2.

2. Calculate the integral $\int_{0}^{\frac{\pi}{2}} \sin(x)\mathrm{d}x$.

3. Consider the function $F(x) = \int_{0}^{x} t - 2\mathrm{d}t$.
   (a) The graph of $y = t - 2$ is shown. Shade in the graph what area corresponds to the number $F(3)$:

   (b) Compute $\dfrac{\mathrm{d}}{\mathrm{d}x}F(x)$.