(i) Find area $A(x)$ between the graph of $f(x) = x + 2$ over $[-2, x]$ by a formula from geometry.

(ii) Evaluate $\int \tan^3 5x \sec^2 5x \, dx$.
(i) Find net signed area by the rectangle method between the graph of \( y = f(x) = x - 5 \) and the interval \([0, 10]\).

(ii) Use derivative of \( f(t) = -\frac{t^2}{2} \) to state the corresponding integral formula.
(i) Use right end points in rectangle method to find the area under the curve $y = x^3$ over the interval $[2, 6]$.

(ii) Evaluate $\int \cos^2 x \, dx$. 

(i)
(i) For \( f(x) = \sqrt{1-x^2}, x \in [0,1] \), use rectangle method to approximate \( A_n \) when \( n = 4 \).

(ii) Solve the initial-value problem:

\[
\begin{align*}
    f''(x) &= 4x - 1, & f'(2) &= -2 \text{ and } f(1) &= 3.
\end{align*}
\]