SET UP the integral to find the area of the region bounded by the graphs of $y = x^2 - 2x$ and $y = 2x + 5$.

Limits:
$x^2 - 2x = 2x + 5$
$x^2 - 4x - 5 = 0$
$(x - 5)(x + 1) = 0$
$x = 5, -1$

$$A = \int_{-1}^{5} [(2x + 5) - (x^2 - 2x)] \, dx$$

SET UP the integral to find the area of the region bounded by the graphs of $y = \sqrt{x-1}$, $x = 0$, $y = 0$ and $y = 2$.

$$y = \sqrt{x-1}$$
$$y^2 = x - 1$$
$$y^2 + 1 = x$$

$$A = \int_{0}^{2} [(y^2 + 1) - 0] \, dy$$
SET UP  the integral to find the area of the region bounded by the graphs of graphs of \( y = x^2 - 2x \) and \( y = 2x + 5 \).

\[
A = \int_0^1 (2 - 0) \, dy + \int_1^5 (2 - \sqrt{x-1}) \, dx
\]

SET UP  the integral to find the area of the region bounded by the graphs of \( y = \sqrt{x-1} \), \( x = 0 \), \( y = 0 \) and \( y = 2 \).

\[
\text{limit:} \quad 2 = \sqrt{x-1} \quad 4 = x-1 \quad 5 = x
\]