$= \pi/2 + 2/2$

$= \pi/2 + 1$

$= \pi/2 + 1$

Therefore, the value of the definite integral of $(1 + \sin(2x))$ with respect to x from 0 to $\pi/2$ is $\pi/2 + 1$.

**B. Solve the differential equation**

$$(2x - y + 1)dx + (2y - x - 1)dy = 0$$

To solve the given differential equation: $(2x - y + 1)dx + (2y - x - 1)dy = 0$, we can follow these steps:

If we calculate the partial derivatives of $(2x - y + 1)$ with respect to x and $(2y - x - 1)$ with respect to y:

$\partial(2x - y + 1)/\partial x = 2$

$\partial(2y - x - 1)/\partial y = 2$

Since these partial derivatives are not equal, the equation is not exact.

To make the equation exact, we need an integrating factor. We can calculate it using the formula:

Integrating factor (IF) = $e ^\wedge (\int P(x)dx + \int Q(y)dy)$

Where $P(x)$ and $Q(y)$ are the coefficients of dx and dy, respectively. In this case, $P(x) = 2x - y + 1$ and $Q(y) = 2y - x - 1$.

$\int P(x)dx = \int(2x - y + 1)dx = x^2 - xy + x + C1(y)$

$\int Q(y)dy = \int(2y - x - 1)dy = y^2 - xy - y + C2(x)$

Here, $C1(y)$ and $C2(x)$ represent constants of integration that depend on y and x, respectively.