Integrating a function on a surface

Compute the integral

\[ \int_S (2x + 4y) \, dS \]

where the surface \( S \) is a triangle with vertices \((1, 0, -2), (1, 1, -1),\) and \((3, -1, -2)\).

A \ -2  
B \ 0  
C \ 2  
D \ 5  
E \ I got something different.
Möbius band
Oriented surface?

The triangle from the first example is an orientable surface.

True or False?

A True
B False
C I don’t know.
The graph of a function is an orientable surface.

True or False?

A True
B False
C I don’t know.
Using the orientation from the parameterization of our triangle surface $S$, given by $\mathbf{r}(u, v) = (1 + 2v, u - v, -2 + u)$ compute

$$\iint_S \langle 2, 1, 1 \rangle \cdot d\mathbf{S}.$$ 

A  -1  
B  0  
C  1  
D  2  
E  I got something different.