Ans. Key

Math 2551 A1-3 Exercise 18

Section:

Name:

Student Number:

4}. Which of the following are equal to

$$\int \int_{\Omega} f(x,y) dx dy ?$$

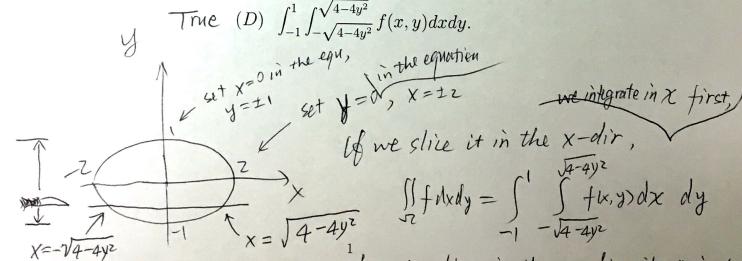
Mark "true" of "false" for each of the following answers.

True (A)
$$\int_{-2}^{2} \int_{-0.5\sqrt{4-x^2}}^{0.5\sqrt{4-x^2}} f(x,y) dy dx;$$

False (B) $\int_{-2}^{2} \int_{-1}^{1} f(x,y) dy dx;$

$$F_{0}/\zeta e$$
 (C) $\int_{-2}^{2} \int_{-0.5\sqrt{4-4y^2}}^{0.5\sqrt{4-4y^2}} f(x,y) dx dy;$

True (D)
$$\int_{-1}^{1} \int_{-\sqrt{4-4y^2}}^{\sqrt{4-4y^2}} f(x,y) dx dy$$
.



$$\iint_{\Sigma} f dx dy = \int_{-1}^{1} \int_{-4-4y^2}^{4-4y^2} dx dy$$

$$\begin{array}{c}
x = \sqrt{4-4y^2} \\
y = \sqrt{4-4y^2}
\end{array}$$
we slice in the y-dir, integrate in y 1st,
$$\begin{array}{c}
y = \sqrt{4-4y^2} \\
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\end{array}$$

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\end{array}$$

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