

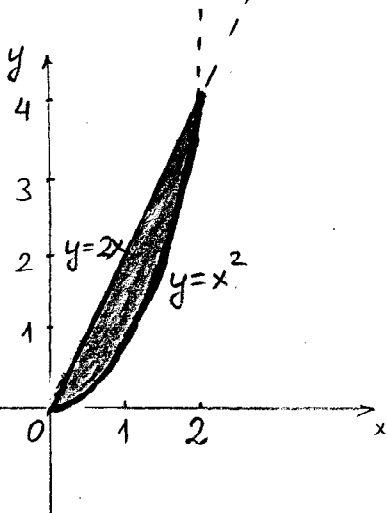
SAMPLE

MATH 116-02 QUIZ 7

Surname\ Name:

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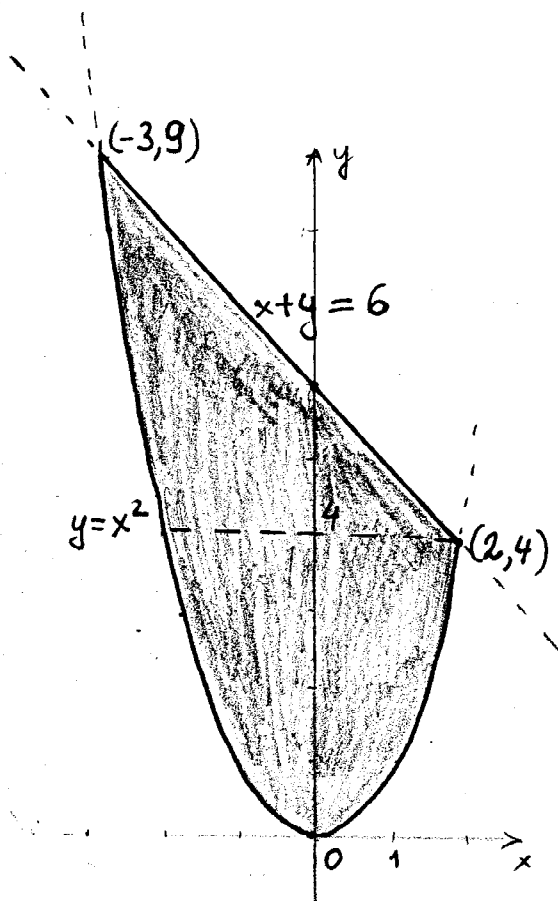
Problem. Sketch the region of integration and write an equivalent integral with the order of integration reversed



$$(a) \int_0^4 \int_{y/2}^{\sqrt{y}} f(x,y) dx dy$$

$$I = \int_0^4 \int_{y/2}^{\sqrt{y}} f(x,y) dx dy =$$

$$= \int_0^2 \int_{x^2}^{2x} f(x,y) dy dx$$



$$(b) \int_{-3}^2 \int_{x^2}^{6-x} f(x,y) dy dx$$

$$I = \int_{-3}^2 \int_{x^2}^{6-x} f(x,y) dy dx =$$

$$= \int_0^4 \int_{-\sqrt{y}}^{\sqrt{y}} f(x,y) dx dy + \int_4^9 \int_{-\sqrt{y}}^{6-y} f(x,y) dx dy$$