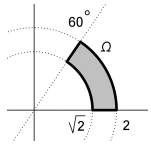
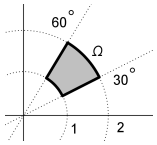
Vypočítejte dvojné integrály přes množinu vyznačenou na obrázku:

(1) $\displaystyle\iint_\Omega \frac{y}{x}\,dxdy$



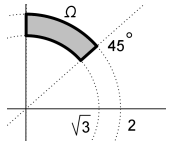
► $\ln 2$

(2) $\displaystyle\iint_\Omega x^2y^2\,dxdy$



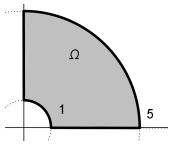
► $\frac{7}{64}(2\pi + 3\sqrt{3})$

(3) $\displaystyle\iint_\Omega \frac{x}{y^2}\,dxdy$



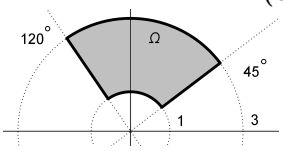
► $\frac{\sqrt{2}}{2}(2-\sqrt{3})(2-\sqrt{2})$

(4) $\displaystyle\iint_\Omega \frac{x}{x^2+2y^2}\,dxdy$



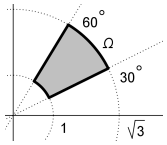
► π

(5) $\displaystyle\iint_\Omega xy\,dxdy$



► $\frac{5}{2}$

(6) $\displaystyle\iint_\Omega xy^2\,dxdy$



► $\frac{1}{60}(41-6\sqrt{3})$