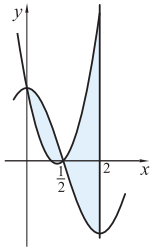
Zadatak 26. Nađi površinu lika omeđenog krivuljama $y = 6x^2 - 5x + 1$, $y = \cos \pi x$ i pravcima $x = 0$, $x = 1$.

Rješenje. $P = \int_0^{\frac{1}{2}} (\cos \pi x - 6x^2 + 5x - 1)dx + \int_{\frac{1}{2}}^{1} (6x^2 - 5x + 1 - \cos \pi x)dx =$

$\frac{\sin \pi x}{\pi}\Big|_0^{\frac{1}{2}} - \frac{6x^3}{3}\Big|_0^{\frac{1}{2}} + \frac{5x^2}{2}\Big|_0^{\frac{1}{2}} - x\Big|_0^{\frac{1}{2}} + \frac{6x^3}{3}\Big|_{\frac{1}{2}}^{1} - \frac{5x^2}{2}\Big|_{\frac{1}{2}}^{1} + x\Big|_{\frac{1}{2}}^{1} - \frac{\sin \pi x}{\pi}\Big|_{\frac{1}{2}}^{1} = \frac{1}{\pi}\left(\sin \frac{\pi}{2} - \sin 0\right) - 2 \cdot \frac{1}{8} + \frac{5}{2} \cdot \frac{1}{4} - \frac{1}{2} + 2\left(1 - \frac{1}{8}\right) - \frac{5}{2}\left(1 - \frac{1}{4}\right) - \frac{1}{\pi}\left(\sin \pi - \sin \frac{\pi}{2}\right) =$

$\pi - \frac{1}{4} + \frac{5}{8} - \frac{1}{2} + \frac{14}{8} - \frac{15}{8} + \frac{1}{\pi} = \frac{2}{\pi} - \frac{1}{4}$.