

Matematika 2 – Junski ispitni rok – I kolokvijum, 1.grupa – rešenja

1.  $I = x \ln(x^3 + x^2 - 4x - 4) - 3x + \ln|x+1| + 2 \ln \left| \frac{x+2}{x-2} \right| + C$  .

2.  $V = 48\pi$  .

3.  $P = 18\pi(2 + \sqrt{2}) + \frac{3\pi}{2}(5\sqrt{5} - 1)$  .

4. b)  $f_{\min}(-6, 18) = -288$  .

5. a) zadovoljeno;      b)  $\frac{\pi}{4}$  ;      c)  $P = \frac{35}{2} - 6 \ln(6)$  .

Matematika 2 – Junski ispitni rok – II kolokvijum, 1.grupa – rešenja

1.  $6\pi + \frac{4}{3}$  .

2.  $I = -\frac{3}{4}$  .

3.  $\frac{37\pi}{12}$  .

4.  $\frac{9\sqrt{21}}{2}\pi$  .

5. a)  $\int_1^2 dy \int_{\frac{4}{y}}^{\frac{4}{x}} f(x, y) dx = \int_1^2 dx \int_1^x f(x, y) dy + \int_2^4 dx \int_{\frac{4}{x}}^{\frac{4}{x}} f(x, y) dy$  ;

b)  $V = 288\pi$  ;      c)  $I = \frac{4}{3}$  .