

ZAD4

$$5(2x^2 - 4x) - x(4 - 5x + 2x^2) =$$

$$= 10x^2 - 20x - 4x + 5x^2 - 2x^3 =$$

$$= -2x^3 + 15x^2 - 24x$$

ZAD5

$$\frac{\sqrt{3}}{3-\sqrt{2}} \cdot \frac{3+\sqrt{2}}{3+\sqrt{2}} = \frac{3\sqrt{3} + \sqrt{6}}{9-2} = \frac{3\sqrt{3} + \sqrt{6}}{7}$$

$$\frac{7}{5+\sqrt{3}} \cdot \frac{5-\sqrt{3}}{5-\sqrt{3}} = \frac{35-7\sqrt{3}}{25-3} =$$

$$= \frac{35-7\sqrt{3}}{22}$$

ZAD6

PIK	1	3	4	5	6	ODCHYL. STANDARD
VALORMIK.	3	2	1	1	1	

$$\bar{x} = \text{SREDNIA PIK} = \frac{\text{SUMA PIK}}{\text{ILOST}} = \frac{1+3+4+5+6}{5} = \frac{19}{5}$$

$$\text{ODCHYLENIE STANDARDNE} = \frac{(e_1 - \bar{x})^2 + (e_2 - \bar{x})^2 + (e_3 - \bar{x})^2 + (e_4 - \bar{x})^2 + (e_5 - \bar{x})^2}{5} =$$

$$= \frac{\left(1 - \frac{19}{5}\right)^2 + \left(3 - \frac{19}{5}\right)^2 + \left(4 - \frac{19}{5}\right)^2 + \left(5 - \frac{19}{5}\right)^2 + \left(6 - \frac{19}{5}\right)^2}{5}$$

$$= \frac{\left(-\frac{14}{5}\right)^2 + \left(\frac{4}{5}\right)^2 + \left(\frac{1}{5}\right)^2 + \left(\frac{6}{5}\right)^2 + \left(\frac{11}{5}\right)^2}{5} =$$

$$= \frac{\frac{196}{25} + \frac{16}{25} + \frac{1}{25} + \frac{36}{25} + \frac{121}{25}}{5} = \frac{\frac{370}{25}}{5} = \frac{370}{125}$$