(2) $f(0) = 0^2 + 1 \neq 0$ ozyh 0 mi jest pronvædhen $f w Z_2 \bar{\iota} X$) $f(1) = 1^2 + 1 = 0$ ozyh 1 jest pronvædhen $f w Z_2 \bar{\iota} X$] Wedy f jed nozhiadalny w $\mathbb{Z}_{r}\tilde{t}x$ 3, bo $f(x) = x^2 + 1 = (x + 1) \cdot (x + 1)$ b) f(x) x2+1 w Zz[X] $f(2) = 2^2 + 1 \neq 0$ 2 - 11 -

Projetad 1 Znelezić roveystlue prerovadu welsoman $\mathbb{Z}_{2}[X]$

Wskarbuke do 5.1, 5.2 f jed menoshtadalny n Zz [X]

algebraucher mad Q.

a)
$$\sqrt{5}$$

(2) $f(x) = (x - \sqrt{5})(x + \sqrt{5}) = x^2 - 5$

(3) $\sqrt{7}$

(4) $\sqrt{7}$

(5) $\sqrt{7}$

(7) $\sqrt{2} + \sqrt{3}(7)^2 = x^3 - 7$

Prysitad 2 Zneleci wielsman minimalny danej

$$\int f(x) = (x - \sqrt[3]{4})(x^2 + \sqrt[3]{4}) = x^2 - 4$$

$$\sqrt{2} + \sqrt{5}$$

$$\sqrt{2} + \sqrt{2}$$

$$\sqrt{2} +$$

 $(2) f(x) = (x - (\sqrt{2} + \sqrt{5}))(x + (\sqrt{2} + \sqrt{5})) = x^2 - (\sqrt{2} + \sqrt{5})^2 = x^2 - 2 - 2\sqrt{10} - 5 = x^2 - 7 - 2\sqrt{10}$

$$f(x) = (x - (\sqrt{2} + \sqrt{5}))(x + (\sqrt{2} + \sqrt{5})) = x^{2} - (\sqrt{2} + \sqrt{5})^{2} = x^{2} - 2\sqrt{10^{2} - 5} = x^{2} - 7 - 2\sqrt{10}$$

$$f(x) = (x - (\sqrt{2} + \sqrt{5}))(x + (\sqrt{2} + \sqrt{5})) = x^{2} - (\sqrt{2} + \sqrt{5})^{2} = x^{2} - 2\sqrt{10^{2} - 5} = x^{2} - 7 - 2\sqrt{10}$$

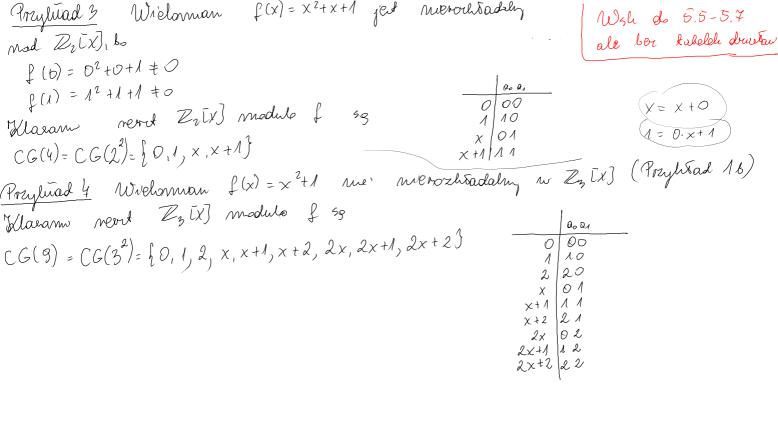
$$f(x) = (x - (12 + 16))(x + (12 + 16))(x + (12 + 16))(x + (12 + 16)) = (x^2 - 4)^2 - (2\sqrt{10})^2 = x^4 - 4x^2 + 48 - 40 = x^4 - 4x^2 + 8$$

$$f(x) = ((x^2 - 4) - 2\sqrt{10})((x^2 - 4) + 2\sqrt{10}) = (x^2 - 4)^2 - (2\sqrt{10})^2 = x^4 - 4x^2 + 48 - 40 = x^4 - 4x^2 + 8$$

$$((x^{2}-4)-2\sqrt{10})((x^{2}-4)+2\sqrt{10})=(x^{2}-4)^{2}-(2\sqrt{10})=x^{2}-4x^{2}+4x^{2}-40=x^{2}-4$$

$$x = (x - t) - \lambda m / (t)$$

Wale do 6,3,5.4



nitrochtadely

 $f(x) = x^2 + x + 1$ jest