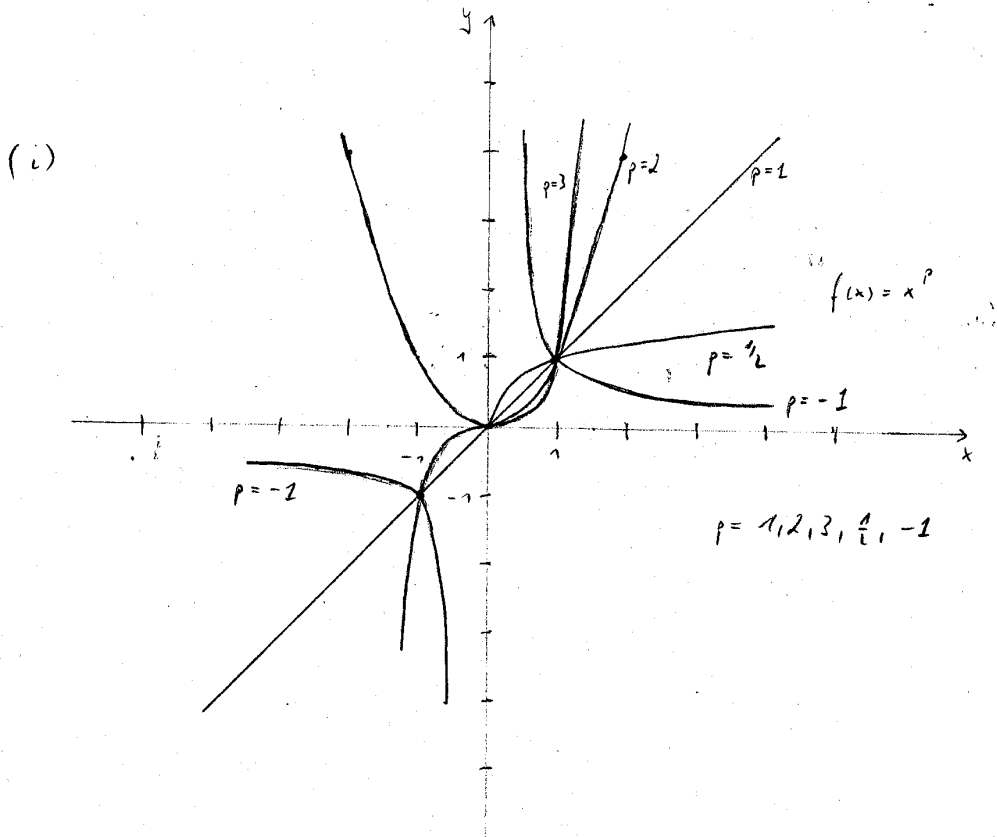


(W4)



(ii)

$$a^{\frac{m}{n}} = \sqrt[n]{a^m}, \quad \frac{1}{a^p} = a^{-p},$$

$$a^p \cdot a^q = a^{p+q}, \quad (a^p)^q = a^{pq}, \quad a^p \cdot b^p = (a \cdot b)^p$$

(iii)

(a) 
$$\frac{\sqrt[2]{ab^5}}{\sqrt[4]{(2a)^2 b^6}} = \frac{\sqrt{ab^5}}{\sqrt{2ab^3}} = \sqrt{\frac{ab^5}{2ab^3}} = \sqrt{\frac{b^2}{2}} = \frac{b}{\sqrt{2}}$$

(b) 
$$\frac{(3a)^2 b^3}{\sqrt{a} b^2} = 9a^2 a^{-\frac{1}{2}} b^3 b^{-2} = 9a^{\frac{3}{2}} b^1 = 9\sqrt{a^3} b^2$$

(c) 
$$\frac{(\sqrt[3]{a^6 b^3} + \sqrt{b^3})^2}{b} = \frac{(a^2 b + \sqrt{b^3})^2}{b} = \frac{a^4 b^2 + 2a^2 b \sqrt{b^3} + b^3}{b}$$

$$= \underline{a^4 b + 2a^2 \sqrt{b^3} + b^2}$$