

$$2746. f_n(x) = x^n; \text{ а) } 0 \leq x \leq \frac{1}{2}; \text{ б) } 0 \leq x \leq 1.$$

$$2747. f_n(x) = x^n - x^{n+1}; \quad 0 \leq x \leq 1.$$

$$2748. f_n(x) = x^n - x^{2n}; \quad 0 \leq x \leq 1.$$

$$2749. f_n(x) = \frac{1}{x+n}; \quad 0 < x < +\infty.$$

$$2750. f_n(x) = \frac{nx}{1+n+x}; \quad 0 \leq x \leq 1.$$

$$2751. f_n(x) = \frac{x^n}{1+x^n}; \text{ а) } 0 \leq x \leq 1-\varepsilon;$$

$$\text{ б) } 1-\varepsilon \leq x \leq 1+\varepsilon; \text{ в) } 1+\varepsilon \leq x < +\infty, \text{ где } \varepsilon > 0.$$

$$2752. f_n(x) = \frac{2nx}{1+n^2x^2}; \text{ а) } 0 \leq x \leq 1;$$

$$\text{ б) } 1 < x < +\infty.$$

$$2753. f_n(x) = \sqrt{x^2 + \frac{1}{n^2}}; \quad -\infty < x < +\infty.$$

$$2754. f_n(x) = n \left(\sqrt{x + \frac{1}{n}} - \sqrt{x} \right); \quad 0 < x < +\infty.$$

$$2755. \text{ а) } f_n(x) = \frac{\sin nx}{n}; \quad -\infty < x < +\infty;$$

$$\text{ б) } f_n(x) = \sin \frac{x}{n}; \quad -\infty < x < +\infty.$$

$$2756. \text{ а) } f_n(x) = \operatorname{arctg} nx; \quad 0 < x < +\infty; \text{ б) } f_n(x) = \\ = x \operatorname{arctg} nx; \quad 0 < x < +\infty.$$

$$2757. f_n(x) = e^{n(x-1)}; \quad 0 < x < 1.$$

$$2758. f_n(x) = e^{-(x-n)^2}; \text{ а) } -l < x < l, \text{ где } l \text{ — любое} \\ \text{положительное число; б) } -\infty < x < +\infty.$$

$$2759. f_n(x) = \frac{x}{n} \ln \frac{x}{n}; \quad 0 < x < 1.$$

$$2760. f_n(x) = \left(1 + \frac{x}{n}\right)^n; \text{ а) на конечном интер-} \\ \text{вале } (a, b); \text{ б) на интервале } (-\infty, +\infty).$$

$$2761. f_n(x) = n(x^{1/n} - 1); \quad 1 \leq x \leq a.$$

$$2762. f_n(x) = \sqrt[n]{1+x^n}; \quad 0 \leq x \leq 2.$$