

V úlohách 1 – 32 vyšetrite priebeh funkcie a načrtnite graf :

1.  $y = \frac{2x}{(x-1)^2}$

2.  $y = 2x^3 - 3x^2$

3.  $y = x^3 + 3x^2 - 2$

4.  $y = (2 - x^2)^2$

5.  $y = \frac{x^2}{x-2}$

6.  $y = \frac{3-x^2}{x+2}$

7.  $y = \frac{x^2+1}{x}$

8.  $y = x^2 + \frac{1}{x}$

9.  $y = \frac{x^3}{2(x+1)^2}$

10.  $y = x - \frac{1}{x}$

11.  $y = \frac{x^2}{4-x^2}$

12.  $y = \frac{1}{x^2-1}$

13.  $y = \frac{x^2}{x^2+4}$

14.  $y = \frac{x}{x^2+4}$

15.  $y = x^2 + \frac{1}{x^2}$

16.  $y = \frac{\ln x}{x}$

17.  $y = \frac{x}{\ln x}$

18.  $y = x \cdot \ln x$

19.  $y = \ln(1+x^2)$

20.  $y = x - 2\operatorname{arctg} x$

21.  $y = \operatorname{arctg} \frac{1}{x}$

22.  $y = \operatorname{arctg} \frac{x-1}{x}$

23.  $y = \operatorname{arctg} \frac{1-x}{1+x}$

24.  $y = e^{\frac{1}{x}}$

25.  $y = e^{\frac{1}{x}} - x$

26.  $y = \frac{e^{\frac{1}{x}}}{x+1}$

27.  $y = \frac{1}{e^{\frac{1}{x}} + 1}$

28.  $y = \frac{1}{e^x - 1}$

29.  $y = x \cdot e^{-\frac{x^2}{2}}$

30.  $y = 16x(x-1^3)$

31.  $y = x \cdot \operatorname{arctg} x$

32.  $y = \frac{2x}{x^2-1} + x$