1.

1   $y = \log(x^5 + 3)$

2   $y = \log\left(\dfrac{1}{x+1}\right)$

3   $y = \log_3(x^2 + 1)$

4   $y = (\log x)^7$

5   $y = \log(\cos x)$

6   $y = x^7 \log x$

7 $y = \log_3 2x$

8 $y = \log \sqrt{x^2 + 1}$

9 $y = x^{\sqrt{x}}$

10 $y = (\sin x)^x$

11 $y = \text{Sin}^{-1}(x^2 + 2x - 3)$

12 $y = \text{Tan}^{-1}\left(\dfrac{3x}{x+4}\right)$