Derivatives Practice Sheet

Compute the following derivatives, for practice. Do not simplify!

1. $$\sqrt[5]{\frac{x^2\sin(3x)}{\tan(x)}}$$

2. $$\tan^4(\sqrt[3]{x^5+x^3+2}+1).$$

3. $$\cos\left(\frac{x^2-\sqrt{5x^2+1}}{x^4+\sin(x/2)}\right)$$

4. $$\left(\sin(4\sqrt{5\tan(\sqrt[3]{\csc(3x^2)})})\right)^5$$

5. $$\frac{\tan(x)+\sqrt[3]{\frac{7\sec(x)+x}{\sqrt{2\sin(x)}}}}{x^4\sin(x/5)\cos(x)}$$

6. $$\cot^{4/3}\left(\frac{\sqrt{\sin(3x/2)+1}+x}{\sin(7x^{5/4})}\right)$$

7. $$\sqrt[7]{\csc\left(\frac{\cos\left((x^3+1)^2\sin(x)\right)+\tan(x)}{\sqrt{5x+3\sin(x)}}\right)}$$