

Math 182 Honors Quiz 8

①

$$\int \arcsin(x) dx$$

②

$$\int x e^{2x} dx$$

③

$$\int \frac{x+1}{x^2+4} dx$$

④ Write the Taylor's formula expressed in little-o notation as $x \rightarrow 0$ for the function $\sin(x)$.

⑤
$$\lim_{x \rightarrow 0} \frac{\sin(\ln(x^2+1)) - x^2}{x^4}$$

⑥
$$\lim_{x \rightarrow 0} \left[\frac{1}{x^5} \left(\arctan(x\sqrt{3}) - \frac{x\sqrt{3}}{1+x^2} \right) \right]$$