ANALISI COMPLESSA - Esercizi - Foglio 7bis

Esercizio. Calcolare i seguenti integrali:

(1)
$$\int_0^\infty \frac{x^2+1}{x^4+1}\,dx;$$

(2)
$$\int_0^\infty \frac{x^3 \sin x}{(x^2+4)^4}\,dx;$$

(3)
$$\int_0^\infty \frac{x \sin x \cos x}{x^4+1}\,dx, \quad a>0;$$

(4)
$$\int_0^{2\pi} \frac{1}{2+\sin x}\,dx;$$

(5)
$$\int_0^\infty \frac{1}{\sqrt{x}(1+x^2)}\,dx;$$

(6)
$$\int_0^{2\pi} \frac{1}{(a+b\sin x)^2}\,dx, \quad a>|b|$$