Name: ID:

1. Calculate $\displaystyle\int_C \frac{2z-3}{z^2(2z^2+9)}\,dz$ where C is the positively oriented circle $\{z : |z| = 2\}$.

For full credit, you must fully justify your answer.

2. Calculate $\displaystyle\int_0^\infty \frac{x\sin 2x}{x^2+3}\,dx$. For full credit, you must justify all steps in your answer.