

1. Differentiate

(a) $\arcsin(x^2)$

(b) $\arctan(3x - 7)$

2. Solve the following indefinite integrals

(a) $\int \frac{1}{1 + 9x^2} dx$

(b) $\int \frac{4x}{\sqrt{1 - 4x^4}} dx$