

Math 33B: Review “Quiz”

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Name: _____

1. Evaluate the following derivatives:

(a) $\frac{d}{dx}x^{101}$

(b) $\frac{d}{dx}(xe^{2x})$

(c) $(\arcsin(3x))'$

2. Evaluate the following integrals:

(a) $\int \tan x \, dx$

(b) $\int \frac{1}{x} dx$

$$(c) \int \frac{1}{4-x^2} dx$$

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

$$(e) \int x \cos x \, dx$$

$$(f) \int \left(\sin x - e^{3x} + \frac{1}{x^3} + 5x^2 \right) dx$$