

Integration Practice ————— Math 1272

$$(1) \int \frac{x}{(8x^2+9)^{\frac{8}{5}}} dx$$

$$(2) \int \frac{20x+24}{16+25x^2} dx$$

$$(3) \int \frac{dx}{\sqrt{16-9x^2}}$$

$$(4) \int \frac{dx}{25+16x^2}$$

$$(5) \int \frac{x}{\sqrt{5x+8}} dx$$

$$(6) \int x \cos(5x) dx$$

$$(7) \int x^5 \ln(x) dx$$

$$(8) \int x^2 \sin(3x) dx$$

$$(9) \int \sin^3(4x) \cos^2(4x) dx$$

$$(10) \int \sin^3(4x) dx$$

$$(11) \int \sin^2(6x) \cos^2(6x) dx$$

$$(12) \int (\sin(5x))^{\frac{3}{5}} \cos^3(5x) dx$$

$$(13) \int \tan^2(x) \sec^4(x) dx$$

$$(14) \int \frac{x^2+38x-27}{(x^2+25)(x+8)} dx$$

$$(15) \int \frac{3x-11}{(2x+9)(x+8)} dx$$

$$(16) \int \frac{40x+105}{(x+3)^2(x+8)} dx$$

$$(17) \int_{5/12}^{5\sqrt{3}/12} \frac{x^3}{\sqrt{25-36x^2}} dx \quad x = (5/6)\sin(\theta)$$