

# Integration

Example Integrate the Following

$$1) \int (5x-8)^9 dx = \frac{(5x-8)^{10}}{50} + c$$

$$2) \int \frac{1}{8x+5} dx = \frac{1}{8} \ln |8x+5| + c$$

$$3) \int \cos(7x-5) dx = \frac{1}{7} \sin(7x-5) + c$$

$$4) \int \sin 3x dx = -\frac{1}{3} \cos 3x + c$$

$$5) \int e^{2(5x+2)} dx = \frac{1}{10} e^{2(5x+2)} + c$$

Rules

$$1) \int (ax+b)^n dx = \frac{(ax+b)^{n+1}}{a(n+1)} + c$$

$$2) \int \frac{1}{ax+b} dx = \frac{1}{a} \ln |ax+b| + c$$

$$3) \int \cos(ax+b) dx = \frac{1}{a} \sin(ax+b) + c$$

$$4) \int \sin(ax+b) dx = -\frac{1}{a} \cos(ax+b) + c$$

$$9) \int e^{ax+b} dx = \frac{1}{a} e^{ax+b} + c$$