

Math 1121

Homework #25

#15, #33

$$\underline{\#15} \quad \int 5x(x^2-8) dx$$

$$= \int 5x^3 - 40x dx$$

$$= 5 \cdot \frac{1}{4} x^4 - 40 \cdot \frac{1}{2} x^2 + C$$

$$= \frac{5}{4} x^4 - 20 x^2 + C$$

$$\underline{\#33} \quad \int \frac{1+2t^3}{4t} dt = \int (1+2t^3) \cdot \frac{1}{4} t^{-1} dt$$

$$= \int \frac{1}{4} t^{-1} + \frac{1}{2} t^2 dt$$

$$= \frac{1}{4} \ln|t| + \frac{1}{2} \cdot \frac{1}{3} t^3 + C$$