(7.1) Integration by Parts

Full Name: _____

1. Use integration by parts to evaluate each of the following indefinite integrals.

(a) $\displaystyle\int 16x \cos(4x)\, dx$

(b) $\displaystyle\int 15y e^{5y}\, dy$

(c) $\displaystyle\int 32x^2 \sin(2x)\, dx$

(d) $\displaystyle\int 64p^3 e^p\, dp$

(e) $\displaystyle\int \ln(12x)\,dx$

(f) $\displaystyle\int 8w^{15}\ln(2w)\,dw$

(g) $\displaystyle\int 9\tan^{-1}(3y)\,dy$

(h) $\displaystyle\int 25e^{5x}\sin x\,dx$