Math 1221: Recitation 3 (R)

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(1) Use integration by parts to solve the following integral.

(a) $\int x^2 \ln x dx$

(b) $\int \sin^{-1} x dx$

(2) Use the substitution rule to solve the following integral. **(Do any one of them)**.

(a) $\int x^5 \sqrt{1 - x^2} dx$

(b) $\int \frac{1 + x}{25 + x^2} dx$

(Bonus) Solve the following integrals. **(Do any one of them)**.

(a) $\int x e^{4x} dx$

(b) $\int \sin(\ln x) dx$

(c) $\int x \tan^{-1}(x) dx$ *(A little hard)*.