W08 INT

8. (3 points each) Let

- $\int_a^b f(x)dx = 8$, and $\int_a^b (f(x))^2 dx = 12$,
- $\int_a^b g(t)dt = 2$, and $\int_a^b (g(t))^2 dt = 3$.

Evaluate the following integrals, if the value can be determined. If there is information missing, clearly state what is missing.

(a) $\int_a^b (f(x) + g(x))dx$

(b) $\int_a^b cf(z)dz$, for c a constant

(c) $\int_a^b (f(x))^2 - g(x^2))dx$

9. (6 points) Find $\int_2^5 f(x)dx$, if $\int_2^5 (3f(x) + 4)dx = 18$.