

(2.) (12 points) Given the following:

- f is an **even** function such that $\int_0^1 f(x) dx = 5$,
- g is an **odd** function such that $\int_0^1 g(x) dx = 7$.

Compute the following definite integrals. If you do not have enough information for a given computation, write “not enough information.”

(a) $\int_0^1 (f(x) - g(x)) dx = -2$

(b) $\int_0^1 3g(x) dx = 21$

(c) $\int_0^1 f(x) \cdot g(x) dx = \text{not enough information}$

(d) $\int_3^4 f(x - 3) dx = 5$

(e) $\int_{-1}^1 (f(x) + g(x)) dx = 10$

(f) $\int_0^1 f(g(x)) dx = \text{not enough information}$