QUIZ 12   **Time: 10min**

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1. Let f be an odd function and g be an even function, and suppose that

$$\int_0^1 |f(x)|\, dx = \int_0^1 g(x)\, dx = 3.$$

Use geometric reasoning to calculate each of the following:

$(a)\ \displaystyle\int_{-1}^1 f(x)\, dx \qquad\qquad (b)\ \displaystyle\int_{-1}^1 g(x)\, dx$

$(c)\ \displaystyle\int_{-1}^1 |f(x)|\, dx \qquad\qquad (d)\ \displaystyle\int_{-1}^1 x\, g(x)\, dx$

Each part is worth 2.5 points.

LaTeX . . . . $\mathcal{MG}$