

### Quiz Problem 6

**Problem.**

Let  $Y$  be a continuous random variable with probability density function given by

$$f(y) = \begin{cases} cy^2(1 - y^4) & 0 \leq y \leq 1, \\ 0, & \text{else} \end{cases}$$

for some unknown value  $c \in \mathbb{R}$ . What is the value of  $c$  that makes  $f$  a PDF?

□