Compute the improper integrals below. Enter the letter "D" if they diverge.

(1) $\displaystyle\int_0^1 \frac{dx}{x^2} =$ [ ]

(2) $\displaystyle\int_0^1 \frac{dx}{x} =$ [ ]

(3) $\displaystyle\int_0^1 \frac{dx}{\sqrt{x}} =$ [ ]

(4) $\displaystyle\int_0^1 \ln x\, dx =$ [ ]

(5) $\displaystyle\int_{-1}^1 \frac{dx}{\sqrt{1-x^2}} =$ [ ]

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(1) $\int_0^1 \frac{dx}{x^2} =$ D

(2) $\int_0^1 \frac{dx}{x} =$ D

(3) $\int_0^1 \frac{dx}{\sqrt{x}} =$ 2

(4) $\int_0^1 \ln x \, dx =$ -1

(5) $\int_{-1}^1 \frac{dx}{\sqrt{1-x^2}} =$ π