

15.
$$\int_0^a \ln \left| \frac{x+t}{x-t} \right| y(t) dt = f(x).$$

Solution:

$$y(x) = -\frac{2}{\pi^2} \frac{d}{dx} \int_x^a \frac{F(t) dt}{\sqrt{t^2 - x^2}}, \qquad F(t) = \frac{d}{dt} \int_0^t \frac{sf(s) ds}{\sqrt{t^2 - s^2}}.$$

References

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