

$$g(x) = x^2 \ln(x)$$

$$2x \ln(x) + \frac{x^2}{x}$$

$$2x \ln(x) + x = 0$$

$$x=0 \text{ works}$$

$$2(0) \ln(0) + 0 = 0$$

$$\frac{2x \ln(x)}{2x} = \frac{-x}{2x}$$

$$\ln(x) = \frac{-x}{2x} = -\frac{1}{2}$$

$$\ln(x) = -\frac{1}{2}$$

$$x = e^{-\frac{1}{2}} \quad 0, e^{-\frac{1}{2}}$$