10.9 1)
$$\int \frac{3}{2x} dx = \int \frac{3}{2} \cdot \frac{1}{x} dx = \frac{3}{2} \int \frac{1}{x} dx = \frac{3}{2} \ln(|x|) + c$$

2)
$$\int \frac{1}{x} \ln(|x|) dx = \int \ln(|x|) \cdot \frac{1}{x} dx = \int \ln(|x|) \cdot \left(\ln(|x|)\right)' dx$$
$$= \frac{1}{2} \ln^2(|x|) + c$$

3)
$$\int \frac{\ln^3(|x|)}{x} dx = \int \ln^3(|x|) \cdot \frac{1}{x} dx = \int \ln^3(|x|) \cdot \left(\ln(|x|)\right)' dx$$
$$= \frac{1}{4} \ln^4(|x|) + c$$

4)
$$\int \frac{1}{x \ln^2(|x|)} dx = \int \frac{1}{\ln^2(|x|)} \cdot \frac{1}{x} dx = \int \left(\ln(|x|)\right)^{-2} \cdot \left(\ln(|x|)\right)' dx$$
$$= \frac{1}{-1} \left(\ln(|x|)\right)^{-1} dx = -\frac{1}{\ln(|x|)} + c$$

Analyse: primitives Corrigé 10.9