(11.19)

$$
\begin{aligned}
&(a)\quad \delta(-x) = \delta(x) \text{ and } \delta(x-a) = \delta(a-x);\\
&(b)\quad \delta'(-x) = -\delta'(x) \text{ and } \delta'(x-a) = -\delta'(a-x);\\
&(c)\quad \delta(ax) = \frac{1}{|a|}\,\delta(x),\ a \neq 0;\\
&(d)\quad \delta[(x-a)(x-b)] = \frac{1}{|a-b|}[\delta(x-a) + \delta(x-b)],\ a \neq b;\\
&(e)\quad \delta[f(x)] = \sum_i \frac{\delta(x-x_i)}{|f'(x_i)|} \quad \text{if } f(x_i) = 0 \text{ and } f'(x_i) \neq 0.
\end{aligned}
$$