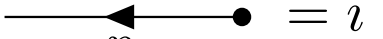
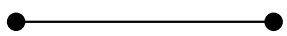
$$\overbrace{\left(i\int \mathrm{d}^4x\, j(x)\phi(x)\right)}|\mathbf{q}\rangle = \quad$$ $$= i\int \mathrm{d}^4x\, j(x)e^{-ip\cdot x} = i\tilde{j}(p)^*,$$

$$\langle\mathbf{q}|\overbrace{\left(i\int \mathrm{d}^4x\, j(x)\phi(x)\right)} = \quad$$  $$= i\int \mathrm{d}^4x\, j(x)e^{ip\cdot x} = i\tilde{j}(p).$$

$$-\int \mathrm{d}^4x\, j(x)\overbrace{\phi(x)\int \mathrm{d}^4y\, j(y)\phi(y)} = \quad$$ 

$$= -\int \frac{\mathrm{d}^4p}{(2\pi)^4}\frac{i}{p^2-m^2+i\epsilon}\left|\tilde{j}(p)\right|^2$$

$$= -\int \frac{\mathrm{d}^3\mathbf{p}}{(2\pi)^3}\frac{1}{2E_{\mathbf{p}}}\left|\tilde{j}(p)\right|^2.$$