Polchinski 2.3 (a)

For $n=2$, $\prod_{i=1}^{n} :e^{ik_i \cdot X(z_i,\bar{z}_i)}: = :e^{ik_1 X_1}::e^{ik_2 X_2}:$

where we have used X_1 to denote $X(z_1,\bar{z}_1)$.

Then the exercise states

$$\langle :e^{ik_1 X_1}::e^{ik_2 X_2}: \rangle = i C^X (2\pi)^D \delta^D(k_1+k_2)\,|z_1-z_2|^{\alpha' k_1 k_2}$$

Recall (eq. 2.2.14) states.

$$:e^{ik_1\cdot X(z,\bar{z})}::e^{ik_2\cdot X(0,0)}: = |z|^{\alpha' k_1 k_2} :e^{i(k_1+k_2)\cdot X(0,0)}[1+O(z,\bar{z})]:$$

Apply $\langle \cdots \rangle$ gives

$$\langle :e^{ik_1 X(z)}::e^{ik_2 X(0)}: \rangle = |z|^{\alpha' k_1 k_2} \langle :e^{i(k_1+k_2)X(0)}[1+O(z,\bar{z})]: \rangle$$

To zeroth-order, this is

$$|z|^{\alpha' k_1 k_2} \langle e^{i(k_1+k_2)X(0)} \rangle$$

$$= \boxed{|z|^{\alpha' k_1 k_2} (2\pi)^D \delta^D(k_1+k_2)}$$

The factors of $(2\pi)^D$ comes from the fact that the δ-function is on variables in phase space.