Step ①

	R	S	T	U
Size	1000	100	100	1000

Step ②

R⋈S	R⋈T	R⋈U	S⋈T	S⋈U	T⋈U
$\frac{100 \times 100}{Rb: 200} = 50$	$\frac{1000 \times 100}{1} = 10^5$	$\frac{100 \times 1000}{Ra: 100} = 10^4$	$\frac{100 \times 100}{Sc: 50} = 200$	$\frac{100 \times 1000}{1} = 10^5$	$\frac{100 \times 1000}{Ua: 1000} = 100$

Greedily, T⋈U has smallest size(100). So take T⋈U.

Next Step ③

(T⋈U)⋈R	(T⋈U)⋈S
$\frac{100 \times 1000}{Ra: 100} = 1000$	$\frac{100 \times 100}{Sc: 50} = 200$

(T⋈U)⋈S has smaller size (200).

Final: ((T⋈U)⋈S)⋈R:

$$\frac{\text{T⋈U⋈S} \downarrow \quad \text{R} \downarrow}{200 \times 1000} = 1000 \text{ size}$$
$$200$$