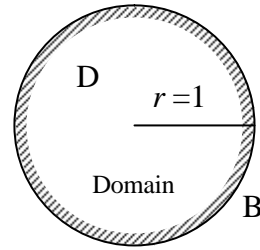


## 程式 53 Trefftz method(內域問題)

Trefftz method :

$$\nabla^2 u(x) = 0, \quad x \in D$$

$$u(x) = \cos(3q), \quad x \in B$$



- (a) By choosing T-complete set,  $1, r \cos q, r \sin q, r^2 \cos 2q, r^2 \sin 2q$ , find the Trefftz solution using the point collocation approach.
- (b) By choosing T-complete set,  $1, r \cos q, r \sin q, r^2 \cos 2q, r^2 \sin 2q, r^3 \cos 3q, r^3 \sin 3q, r^4 \cos 4q, r^4 \sin 4q$ , find the Trefftz solution using the point collocation approach.

### References:

- 【1】吳清森, 林盛益, 林書睿, 陳正宗, On the equivalence of method of fundamental solutions and Trefftz method for Laplace equation, 第十五屆中國造船暨輪機工程研討會, 國立高雄海洋技術學院, 高雄, 2003.