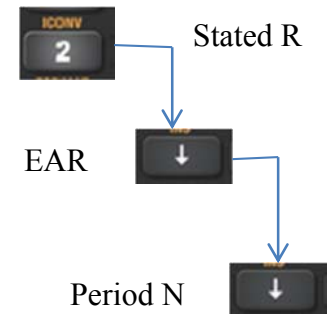


NCB Bank pays a stated annual interest rate of 7.5 percent. What is the effective annual rate using the following types of compounding?

إذا كان المصرف الاهلي الوطني يدفع معدل فائدة معلنة سنوية قدرها 7.5% , فما هو العـدل السنوي الفعلي؟
استخدم الانواع التراكمية التالية:

Parameter	Value	Notes
Stated I/Y (R)	7.5	For calculation using the formula use $7.5/100 = 0.075$.
Effective EAR	?	
Period	Quarterly Monthly Continuous	N = 4 N = 12 Use formula



Quarterly: N = 4

$$EAR = (1 + R/N)^N - 1 \quad EAR = (1 + 0.075/4)^4 - 1 = (1 + 0.01875)^4 - 1 = 0.0771 = 7.71\% \text{ OR}$$

= 7.71%

ICONV = Interest rate conversion

Monthly: N = 12

$$EAR = (1 + R/N)^N - 1 \quad EAR = (1 + 0.075/12)^{12} - 1 = (1 + 0.00625)^{12} - 1 = 0.0776 = 7.76\%, \text{ OR}$$

= 7.76%

Continuous:

$$EAR = e^R - 1 = e^{0.075} - 1 = 0.07788 = 7.79\%$$