T(n)=aT(n/b)+f(n), where a>=1,b>=2 c>0

f(n)=Θ(nd) where d>=0 then

case1: T(n)=Θ(nd) if a<(bd)

case2: T(n)=Θ(ndlogn) if a=(bd)

case3: T(n)=Θ(nloga[base b])

A). T (n) = 3T (n/2) + n

Solution: a=3 b=2 d=1

3>21 =Θ[ nlog3[base 2]]

--------------------------------------------------------------------

b) T (n) = 64T (n/8) − n^2(log n)

Solution: NA

-------------------------------------------------------------------

c) T (n) = 2nT (n/2) + n^n

Solution: NA

------------------------------------------------------------------

d) T (n) = 3T (n/3) + n/2

Solution a=3 b=3 d=1

3=31

=Θ[nlogn]

-----------------------------------------------------------------

e) .T (n) = 7T (n/3) + n^2

solution: a=7 b=3 d=2

7<32

=Θ(n2)