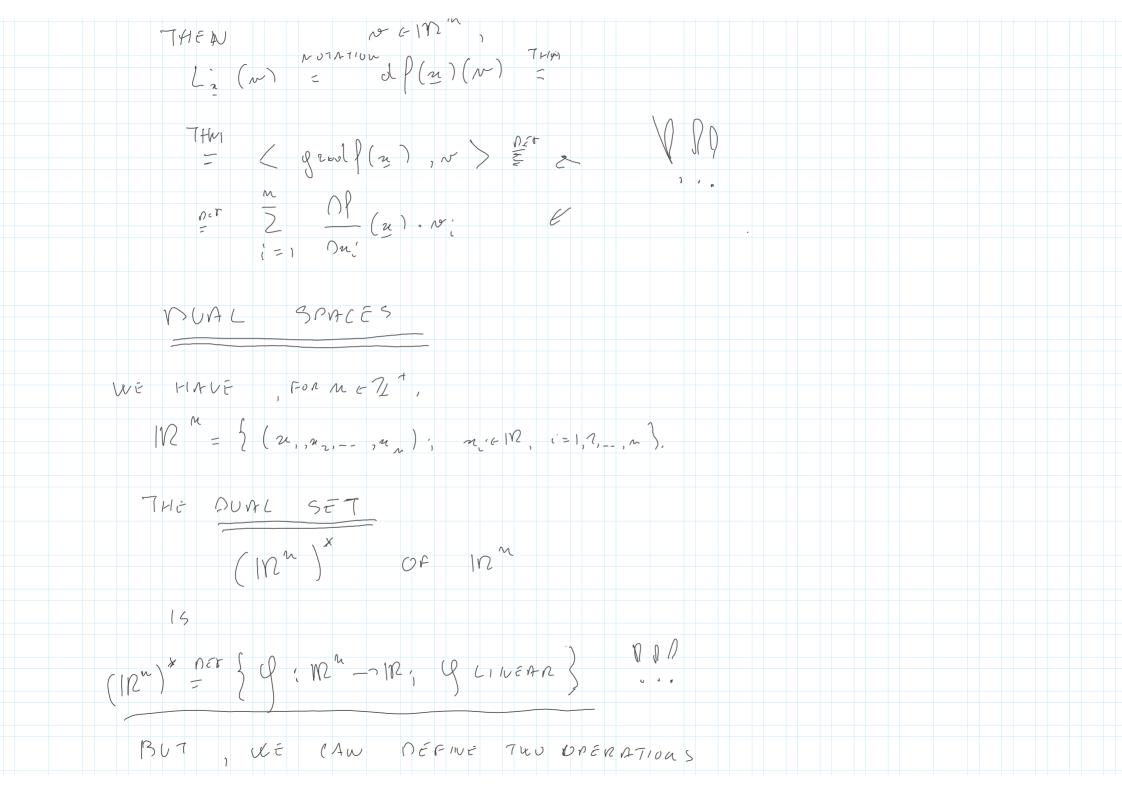


```
(1) =) d ((+g)(z) (() = of(z) (1) - olg (x) (1)
  (2) = )
       d(Pg)(2) (1) = f(2). dg(2) (1)+df(2).g(2)(1
        (3) = 1 \lambda \in \mathbb{R}
          d(\lambda \beta)(n)(\beta) = \lambda \cdot d\beta(\beta)(\beta)
              (xf) (2) = 1. f (2).
               15 17 CEENR.
     LIOW TO WRITE A MIFFERENTIAL
      1N70 AN 1NTRINSIE WAY 777
   WE RECULL: E E MERM, A GREN, M CA
     ASSUME THAT & NIVER AT TO A
```



 $(n^n)^{\bullet}$ 1) Q, Y = (12 ") x (Y, Y LIVETED) y recmn $(\varphi + \varphi)(\varkappa) \stackrel{\text{DEF}}{=} \varphi(\varkappa) + \varphi(\varkappa).$ THEW (OBUIOUS), G+ 4 115 LINEMED 9 + 4 c (12 m) . 2) Le 12 senzan, facon ()(2) =) P(3) 15 LINCAN , THAT IS 29 c ((2") * MAIN FACT ((\n\n), f, scherr Sum NULT. THAT IS CAZLEN: THE NUML SPINET (Mn) of THE SPACE Mm. WHAT IS THE ZERO VECTOR OF THIE

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MUAL SPACE (R'M) (!!
   AWSWER : THE ZENO VECTUR OF (12") = 13.
    O: IRM -> IR, O (2) = JGR H 26 GR
     INNEED, WE HAVE: PE (12m)*
    Q+0=9=0+9
   1-10W TO NESCRIBE THE MOAL SOMEES
             \left( \left( \left( \right) \right) \right) \times \left( \left( \left( \right) \right) \right) 
    IN PARTIEURAR: WHAT IS THE DIMENSION
         d((112m)) OF THE DUAL SONCE (12").17
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BREAK QUESTIONS?

PRÉCIM ACAIM AT 15,10