```
+(x) ... g (x)
33. f(x) = e x . cos(x)
   f'(x) = _A [ex. cos(x)] = ex. A (cos(x)) + cos(x). A (ex)
                          e * . - sin(x) + cos(x) . e *
                 f'(x) = ex(-sin(x)) + excos(x)
 A Cex
  +(x+h) = e x+h
  f(x) = e x
  f(x) = lim f(x+h) - f(x)
       h->0
                 h
       limex+h-ex
       N →0
       lim ex.eh -ex
       470
       lim ex(en-1)
       ex. lim (en-1)
                          Dex
                          1im (eh-1) =1
             h +0
```

```
f"(x) = d [e (-sin(x)) + e cos(x)]
         . d [ex.cos(x) - ex.sin(x)]
        _d_(e<sup>x</sup> cos (x)) - _d_(e<sup>x</sup> s:n(x))

dx

-dx
ex. 9x (x) 3x (x) . 9x [ex]
                                          ex (x) + sin(x) . d (ex)
ex. -sin(x) + cos(x) . ex.
                                          e x.. cos(x) + 5in(x) · ex
(-sin(x)) ex -+ ex cos(x)
                                       (excoscx) + exsin(x))
- e x sin(x) + e x cos(x)
                                                   exsin(x)
                                       e x (05 (x)
                             - De K sin (x)
                         f"(x) = -2 ex sin(x)
```