2.3: Calculating Limits Using the Limit Laws Friday, April 19, 2024 11:08 PM Limit Laws: · Limit Laus? c is constant & & Cing(x) Cim fcx) X-Da exist O lim[fcx] + gcx] = limfcx) + limgcx)
x-on
x-on @ Lim [fox) -gcx] = Limfles - limg(x) x-oa
x-oa DLim [cfcx] = clim fcx) 4 Cim [fex) gex)] = Lim fax). Lim ques
2 pa x pa x pa Limfar)
Limfar)

Limfar)

Limfar) if limger) #0 Lim gcx) x-pa (6) Lim [fex] = [Lim fex] ^ Ctmink x-pa DLIMC = C x-pa & Lim x=a x-oa vune ~ is pos. Z $0 \quad \lim_{x \to \infty} x^{x} = a^{x}$ when a is Zit (To Lim Tx = Fa cif niseum, presure asos (1) Lim ofco = Thim foo when a is x-on y-on cif nis eur, presme Lim fex>>0) Direct Substitution proporty: fis rational of polynomial of Mail is in the domain of "for Limfexs = fca> L if f(x) = J(x) when $x \neq a$, then (imfcx) = Limqcx), provided the x-pn Limits exist . when doing the proofs for Limits, you ar going to have to use bur Limits Lars I doing the left & right hand Limits · Squeeze tues ! foxs Egexs Enex) wm"x"is new "a (x ≠ a) Limfux) = Limhux) = L ; -Da LimfLX> = L