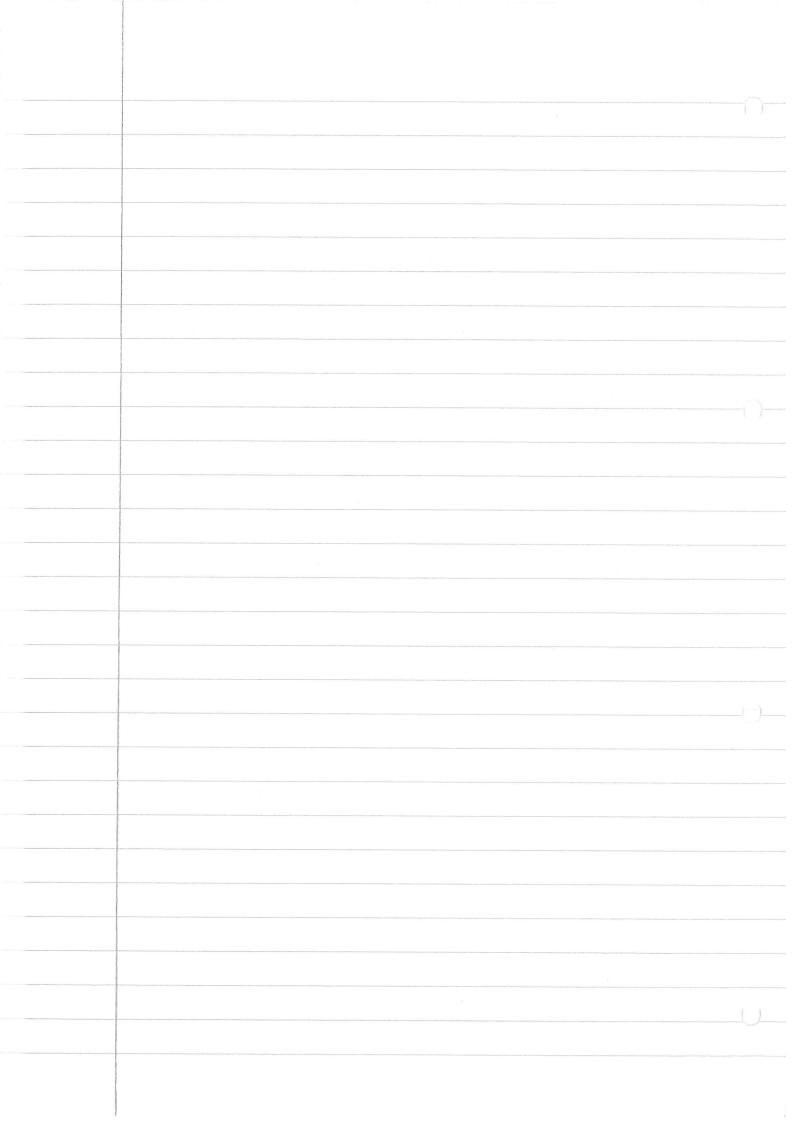


Set 68%

Ast 3,2 Derive the Ideal gass law. P=nbT P= 3 [pv mp) dp MGD= MP(p) er tetthetsdistribusjones. 7= 1 Sprncpsdp P = 1 5 P u(p)dp = 3m f u(2 mbt) -411-e 2/2mlet. p4 dp Substitusjones x = p2 slikat p2= 2mkTx videre Blar dp = 2 /2 mkT dx Subsiderer P=4irm (1) = x(2mkTx) 1/2mkT dx legger Sanower . P = 211 m (1 2 mkT) (2 mkT) Je x dx VI bruker gamma Junks orner $\Gamma(\frac{S}{2}) = \frac{3}{2}\Gamma(\frac{S}{2}) = \frac{3}{2}V_{ij}^{ij}$ Da fa'r VI $P = \frac{1}{2m}\left(\frac{1}{2mkT}\right)\left(2mkT\right) = mkT$



Ast 3, 3 Mede des genonsultlige aregientil underglare en deel gass. E= 1 mv2 = SPCv3. 2 mv2dv 2 (2067) 40 e 2 (47). V2 du VI substituerer / = 1 moz slik at v2 = 2 xkT Dablir dv= to dx = to Tri dx = to Tri dx VI selering E= = (2) 3/2 4/1 = (2xbT) /2 /2 /2 /2 Vilgser Integralet. E= 12 (1/2) 41 (1/2) 1/21 . 3 VA Aryland bluda E= 3 m (2/2/2) (2/1/2) [2/1] Jette Historier E = 3kT

