(а) $\int \ln x\, dx,$

(б) $\int \operatorname{arctg} x\, dx$

(в) $\int \arcsin x\, dx$

2)
S(arctgx) dx = arctg x* x - S(x/(1 + x^2))dx = xarctgx - S(d(x^2 / 2) / (1 + x^2))=
= xarctgx - ½ S(d(x^2) / (1 + x^2)) = xarctgx - ½ S(d(t) / (1 + t)) =
= xarctgx - ½ S(d(t+1) / (1 + t)) = xarctgx - ½ S(dz / z) = xarctgx - ½lnz + C =
= xarctgx - ½ln(t+1) + C = xarctgx - ½ln(x^2+1) + C

u = arctg x
du = 1/(1 + x^2)
dv = dx
v = x

xdx = d(x^2 / 2)
x^2 = t

t+1 = z

dt=d(t+1)

3)
S(arcsinx)dx = arcsinx * x - S(xdx/V(1-x^2)) =
xarcsinx - S(d(x^2 / 2) / V(1-x^2)) =
xarcsinx - 1/2S(d(x^2) / V(1-x^2)) = xarcsinx - 1/2S(d(t) / V(1-t))=
=xarcsinx - 1/2S(d(t) / V(1-t)) = xarcsinx + 1/2S(d(-t+1) / V(1-t))=
=xarcsinx + 1/2S(d(z) / V(z)) = xarcsinx + 1/2S(z^(-½)dz) =
xarcsinx + z^½ + C = xarcsinx + (-t+1)^½ + C =
xarcsinx + (-x^2+1)^½ + C = xarcsinx + V(1-x^2) + C

u = arcsinx
du = 1/V(1-x^2)dx
dv = dx
v=x
x^2 = t

-t+1 = z