(1) [5] Determine the exact value of $\arcsin(-1/\sqrt{2})$.

(2) [5] Simplify $\cos(\tan^{-1} x)$. Your final simplified answer should not contain any trigonometric or inverse trigonometric functions.

(3) [5] Differentiate

$$g(x) = \arccos\left(2 - 3x\right)$$

and state the domain of $g(x)$.