Decompose the following functions into simpler ones:

$\sqrt{2x+1}$	$\frac{x^2+1}{1-x}$	$(1-2x^3)e^x$
$\sin(3x^2)$	$\frac{\sqrt{1-x^2}}{\sin(x)}$	$\cos\left(\frac{x+1}{x-1}\right)$
$e^{5x^{17}+1}(3x^2+\tan x)$	$\cos\left(\sqrt{4-7x^2}\right)$	$\sqrt{\frac{3x^2-1}{(3x^2+1)\sqrt{2-x^2}}}$

- Find all values of θ in $[0, 2\pi]$ that satisfy the equation $\sin\theta = \frac{\sqrt{3}}{2}$.
- Find all values of x in $[0, \pi]$ that satisfy the equation $\sin^2 2x = \frac{3}{4}$.
- Let $f(x) = \sqrt{2x+1}$ and $g(x) = \frac{x+2}{x-1}$. Find $f+g$, $f \cdot g$, $f \circ g$, $g \circ f$, and their respective domains.
- Let $f(x) = \log_2(x-1)$ and $g(x) = \sqrt{1+x}$. Find $f+g$, $f \cdot g$, $f \circ g$, $g \circ f$, and their respective domains.