$$
\begin{aligned}
(2)g'(x) &= \lim_{h\to 0}\frac{g(x+h)-g(x)}{h}\\
&= \lim_{h\to 0}\frac{\sqrt{2(x+h)+3}-\sqrt{2x+3}}{h}\\
&= \lim_{h\to 0}\frac{2(x+h)+3-(2x+3)}{h(\sqrt{2(x+h)+3}+\sqrt{2x+3})}\\
&= \lim_{h\to 0}\frac{2h}{h(\sqrt{2(x+h)+3}+\sqrt{2x+3})}\\
&= \lim_{h\to 0}\frac{2}{\sqrt{2(x+h)+3}+\sqrt{2x+3}}\\
&= \frac{2}{\sqrt{2x+3}+\sqrt{2x+3}}\\
&= \frac{1}{\sqrt{2x+3}}
\end{aligned}
$$

$$
\begin{aligned}
(3)h'(x) &= \lim_{i\to 0}\frac{h(x+i)-h(x)}{i}\\
&= \lim_{i\to 0}\frac{\dfrac{1}{(x+i)-3}-\dfrac{1}{x-3}}{i}\\
&= \lim_{i\to 0}\frac{x-3-(x+i-3)}{i(x-3)(x+i-3)}\\
&= \lim_{i\to 0}\frac{-i}{i(x-3)(x+i-3)}\\
&= \lim_{i\to 0}\frac{-1}{(x-3)(x+i-3)}\\
&= -\frac{1}{(x-3)(x-3)}\\
&= -\frac{1}{(x-3)^2}
\end{aligned}
$$