$$
\begin{aligned}
& f(x)=x+3 \text { and } g(x)=x^{2}+x-1 . \\
& {[f \circ g](x) }=f[g(x)] \\
&=f\left(x^{2}+x-1\right)=\left(x^{2}+x-1\right)+3 \\
& {[f \circ g](x) }=x^{2}+x+2 \\
& {[g \circ f](x) }=g[f(x)] \\
&=g(x+3) \\
&=(x+3)^{2}+(x+3)-1 \\
&=(x+3(x+3)+(x+3)-1 \\
&=x^{2}+3 x+3 x+9+x+3-1 \\
& {[g \circ f](x) }=x^{2}+7 x+11
\end{aligned}
$$

February 122013 2nd.gwb - 2/3 - Tue Feb 122013 09:13:39

$$
\begin{aligned}
& f(x)=x^{2}+4 \quad g(x)=x-9 \quad h(x)=3 x+5 \\
& {[f \circ g]^{2}(3)=f[g(3)]=f(-6)=(-6)^{2}+4=40} \\
& g(3)=3-9=-6 \\
& {[h \circ g](-2)=h[g(-2)]_{\sigma}=h(-11)=3(-11)+5=-28} \\
& g(-2)=-2-9=-11 \\
& f(x)=4 x+2 \quad g(x)=2 x^{2}+3 x-1 \\
& \left.[g \circ f](3): g[f(3)]=g(1.4)=2(14)^{2}+31144\right)-1=433 \\
& f(3)=4(3)+2=14
\end{aligned}
$$

15-16, 28-31, 33-42, 46-47, 56-57

