Exercise 1 *If you know that* $\lim_{x\to 6}\dfrac{f(x)}{x}=5$ *and* $\lim_{x\to 6} g(x)=2$*, then evaluate the following limit:*

Hint: *Multiply numerator and denominator by* x*.*

$$\lim_{x\to 6}\frac{f(x)}{g(x)}=\boxed{15}$$

Exercise 2 *If you know that* $\lim_{x\to 6}\dfrac{f(x)}{x}=5$ *and* $\lim_{x\to 6} g(x)=2$*, then evaluate the following limit:*

Hint: *Multiply* $f(x)$ *by* $\dfrac{x}{x}$*.*

$$\lim_{x\to 6} f(x)=\boxed{30}$$

Exercise 3 *If you know that* $\lim_{x\to 6}\dfrac{f(x)}{x}=5$ *and* $\lim_{x\to 6} g(x)=2$*, then evaluate the following limit:*

Hint: *Use the result in previous exercise.*

$$\lim_{x\to 6}(f(x)-9g(x))=\boxed{12}$$

Exercise 4 *If you know that* $\lim_{x\to 6}\dfrac{f(x)}{x}=5$ *and* $\lim_{x\to 6} g(x)=2$*, then evaluate the following limit:*

$$\lim_{x\to 6}\Big(f(x)(x-g(x))\Big)=\boxed{120}$$
