Table of function values and derivative values.

x	-2	-1	0	1	2	3	Row 1
f'(x)	4	$\frac{2}{3}$	$-\frac{1}{3}$	-1	-2	-4	Row 2
g'(x)	4	$\frac{2}{3}$	$-\frac{1}{3}$	-1	-2	-4	Row 3
h'(x)	can't find	-12	1	can't find	can't find	can't find	Row 4

a) $g(x)=f(x)-2$

The derivative of $g(x)$ is $g'(x)=\frac{d}{dx}\big(f(x)-2\big)=\frac{d}{dx}f(x)-\frac{d}{dx}(2)=f'(x)$

This means the third row has the same values as the first row.

b) $h(x)=f(-3x)$. To differntiate this, you have to use the chain rule.

1) $h'(x)=\frac{d}{dx}f(-3x)=f'(-3x)(-3)=-3f'(-3x)$ chain rule

2) At $x=-2$, we have $h'(-2)=-3f'(-3(-2))=-3f'(6)$.
We stop here because we don't know $f'(6)$.

3) At $x=-1$, we have $h'(-1)=-3f'(-3(-1))=-3f'(3)=-3(-4)=-12$

4) At $x=0$, we have $h'(0)=-3f'(0)=-3\left(\frac{-1}{3}\right)=1$

5) The other values can't be found, as in 2) above.