

## **Group Work GW04: Finding Limits Using the Limit Rules**

[1] Find  $\lim_{x\to 2} f(x)$  for a function f(x) with the property that  $4x-3 \le f(x) \le x^2+1$ .

[2] Using the given special limit

$$\lim_{x \to 0} \frac{\sin(x)}{x} = 1$$

Find 
$$\lim_{x\to 0} \frac{\sin(7x)}{3x}$$

[3] Find  $\lim_{x \to 25} \frac{\sqrt{x} - 5}{x - 25}$ 

[4] Let  $f(x) = -x^2 + 6x$ . Find the limit of the *difference quotient*.

$$\lim_{h\to 0} \frac{f(1+h)-f(1)}{h}$$