**2G Solving Modulus Equations**

1. Given the function:

$$t\left(x\right)=3\left|x-1\right|-2, x\in R$$

1. Sketch the graph of the function



1. State the range of the function
2. Solve the equation $t\left(x\right)=\frac{1}{2}x+3$



1. The function $f$ is defined by:

$$f:x\rightarrow 6-2\left|x+3\right|$$

A sketch of the graph is shown.



1. State the range of $f$
2. Explain why $f^{-1}$ does not exist
3. Solve the inequality $f\left(x\right)>5$

