

## Section 3: The modulus function

### Exercise level 3 (Extension)

1. Sketch the following on separate graphs.  
Do not use a graphical calculator or graphing software.
  - (i)  $y = ||x| - 4|$
  - (ii)  $y = (x+1)|x-1|$
  - (iii)  $y = |x| + |x+1|$
2. Solve the inequality  $x^2 - 4|x| + 3 < 0$ .