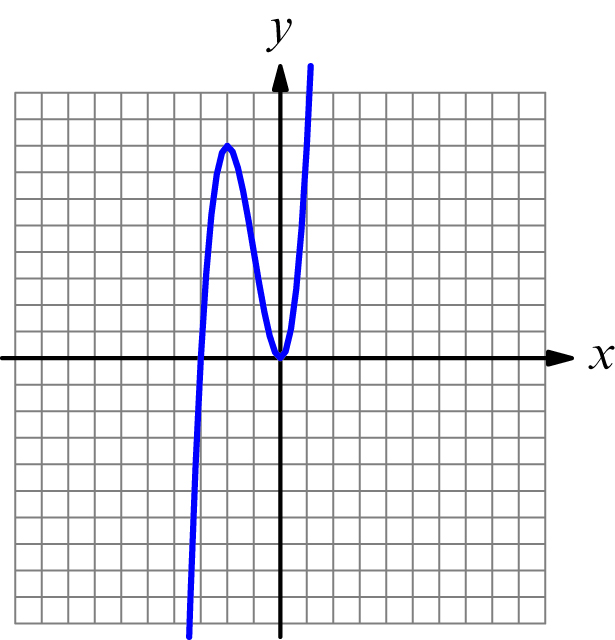
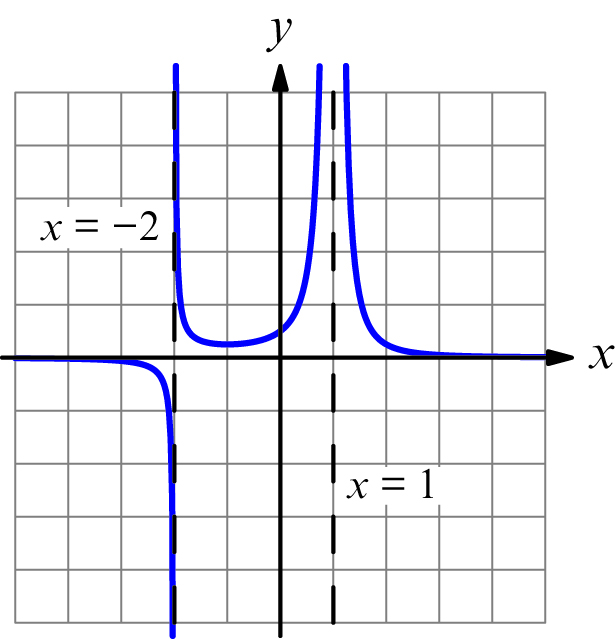
**Self-assessment answers: 6 Transformations of graphs**

**1.** (a)

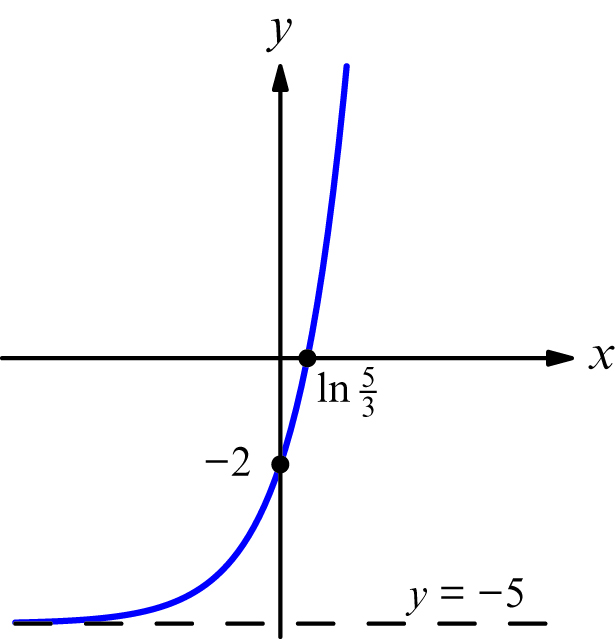
****

(b)



*[6 marks]*

**2.**



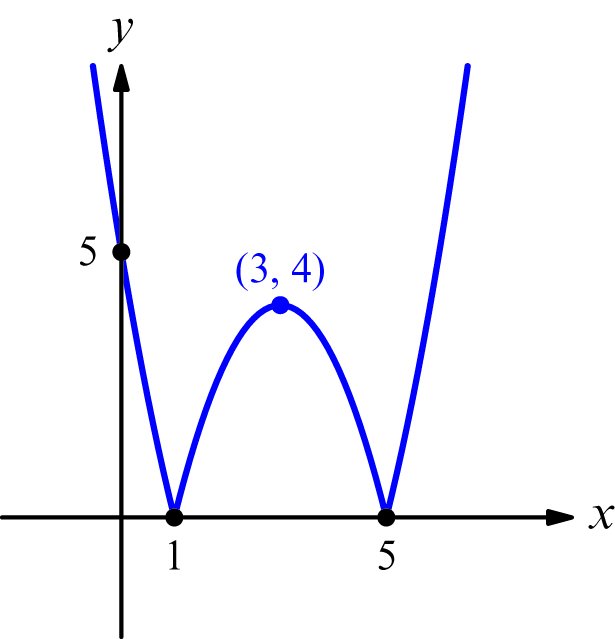
Horizontal asymptote *y* = −5. Intercepts at (0, −2) and  *[5 marks]*

**3.** Even function requires that all powers of *x* with non-zero coefficients in the polynomial are even.

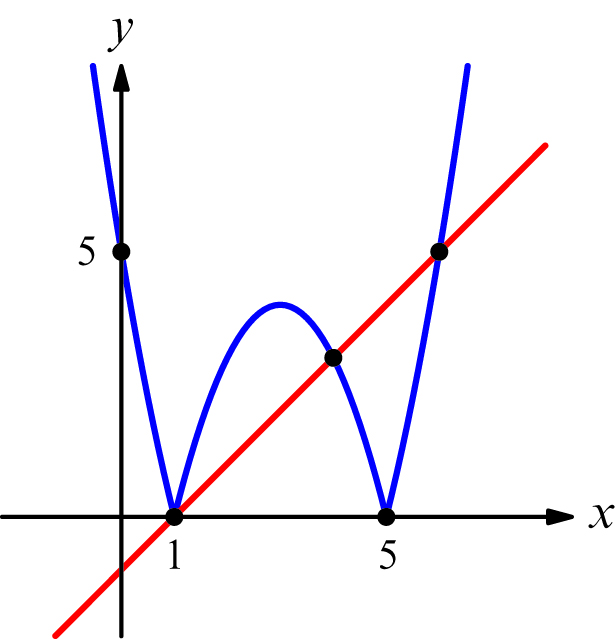
*b* = 0 *[3 marks]*

**4.** (a) (i) (*x* −3)2 − 4

(ii) Translation by 

(iii)   


(b) (i)



(ii) |*x*2 – 6*x* + 5| = *x* −1

⇒ (*x*2 – 6*x* + 5)2 = (*x* – 1)2

⇒ ((*x* – 1)(*x* – 5))2 = (*x* – 1)2

⇒ (*x* – 1)2(*x* – 5)2 = (*x* – 1)2

⇒ (*x* – 1)2((*x* – 5)2 – 1) = 0

⇒ *x* = 1 or (*x* – 5) = ± 1

*x* = 1, *x* = 4, *x* = 6

(iii) *x* ∈] − ∞, 1[∪]1, 4[∪]6, ∞[ *[16 marks]*