

**3** Expand and simplify the following brackets.

**(a)**  $(x + 3)(x + 4)$

**(b)**  $(x + 5)(x + 2)$

**(c)**  $(y + 6)(y + 3)$

**(d)**  $(h + 8)(h + 5)$

**(e)**  $(f + 9)(f - 2)$

**(f)**  $(g + 8)(g - 3)$

**(g)**  $(r - 6)(r + 4)$

**(h)**  $(p - 7)(p - 5)$

**(i)**  $(n - 9)(n - 4)$

**(j)**  $(d - 8)(d + 4)$

**4** Expand these brackets and write down any patterns you notice.

**(a)**  $(x + 3)(x - 3)$

**(b)**  $(x - 5)(x + 5)$

**(c)**  $(y + 6)(y - 6)$

**(d)**  $(h + 8)(h - 8)$

**(e)**  $(f - 9)(f + 9)$

**(f)**  $(g + 4)(g - 4)$

**5** Expand and simplify the following brackets.

**(a)**  $(x + 3)^2$

**(b)**  $(x - 5)^2$

**(c)**  $(y + 6)^2$

**(d)**  $(h + 8)^2$

**(e)**  $(f + 9)^2$

**(f)**  $(g - 8)^2$

**(g)**  $(r - 6)^2$

**(h)**  $(p + 7)^2$

**(i)**  $(n - 9)^2$

**(j)**  $(d - 2)^2$