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