

# Always? Sometimes? Never?

$$x^2 + \boxed{A}x + \boxed{B} \equiv (x + \boxed{C})^2 + 8$$

1.  $C$  is less than  $A$ .

2. The vertex has an  $x$ -coordinate of 8.

3.  $B$  is less than  $A$ .

4. If  $C$  is an integer, so is  $A$ .

5. If  $A$  is an integer, so is  $C$ .

6.  $B$  is greater than 8.

7. If you know  $B$ , you can work out  $A$  and  $C$ .

8. The quadratic has two roots.

9. The quadratic's minimum value is 8.

10. If you know  $A$ , you can work out  $B$  and  $C$ .