REI.4a

1. To solve the equation $x^2 + 6x + 1 = 0$ by completing the square, begin by subtracting 1 from each side of the equation, resulting in $x^2 + 6x = -1$. What value must be added to each side of the equation in the next step?

A 3
B 6
C 9
D 36

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2. The general quadratic equation $ax^2 + bx + c = 0$ may be solved by completing the square as follows.

$$ax^2 + bx + c = 0$$

$$ax^2 + bx = -c$$

$$x^2 + \frac{b}{a}x = -\frac{c}{a}$$

$$x^2 + \frac{b}{a}x + \left(\quad\right)^2 = -\frac{c}{a} + \left(\quad\right)^2$$

What belongs in the parentheses to complete the square?

A $\frac{2b}{a}$

B $\frac{b}{2a}$

C $\frac{b}{2}$

D $\frac{b}{a}$

