

- If x is real and satisfies $x+2 > \sqrt{x+4}$ then

A) $x < -2$

B) $x > 0$

C) $-3 < x < 0$

D) $-3 < x < 4$

Correct Answer: B

Solution:

Given,

$$x+2 > \sqrt{x+4}$$

$$\Rightarrow (x+2)^2 > (x+4)$$

$$\Rightarrow x^2 + 4x + 4 > x + 4$$

$$\Rightarrow x^2 + 3x > 0$$

$$\Rightarrow x(x+3) > 0$$

$$x < -3 \text{ or } x > 0$$

$$\Rightarrow x > 0$$