

Question 1

The normal distribution has the form

$$P(x) = B e^{-(x-x_0)^2/2a^2}$$

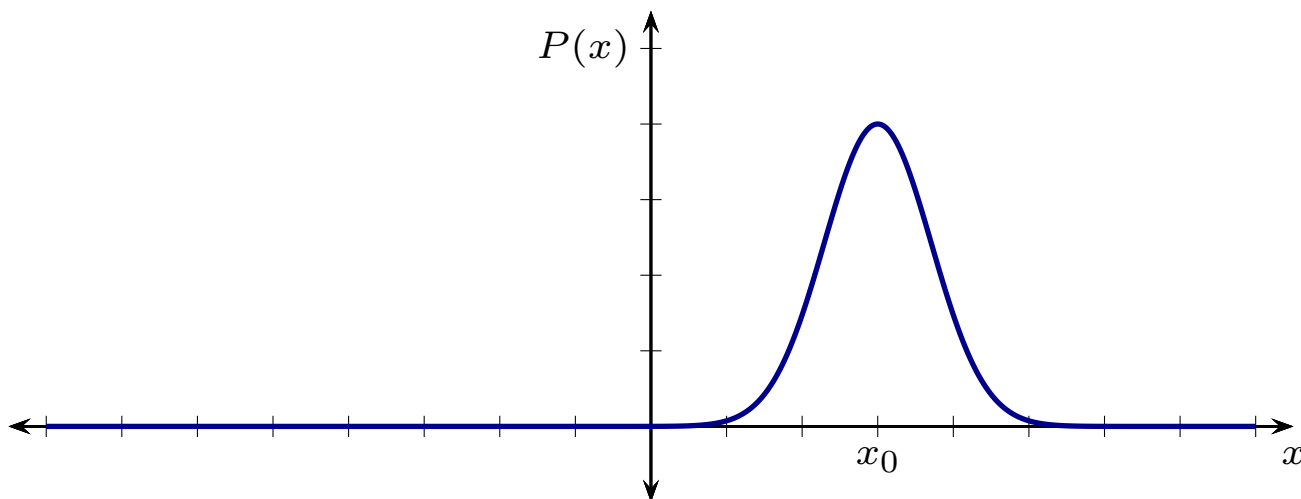
where x_0 , a and B are constants.

Which of the following is true about the distribution?

1. Max at $x = 0$ and is symmetric to the left and right of this.
2. Max at $x = 0$ and is skewed to the left of this.
3. Max at $x = 0$ and is skewed to the right of this.
4. Max at $x = x_0$ and is symmetric to the left and right of this.
5. Max at $x = x_0$ and is skewed to the left of this.
6. Max at $x = x_0$ and is skewed to the right of this.

Gaussian/Normal Probability Density

$$P(x) = \frac{1}{\sqrt{2\pi} a} e^{-(x-x_0)^2/2a^2}$$



Question 2

The normal distribution has the form

$$P(x) = \frac{1}{\sqrt{2\pi} a} e^{-(x-\bar{x})^2/2a^2}$$

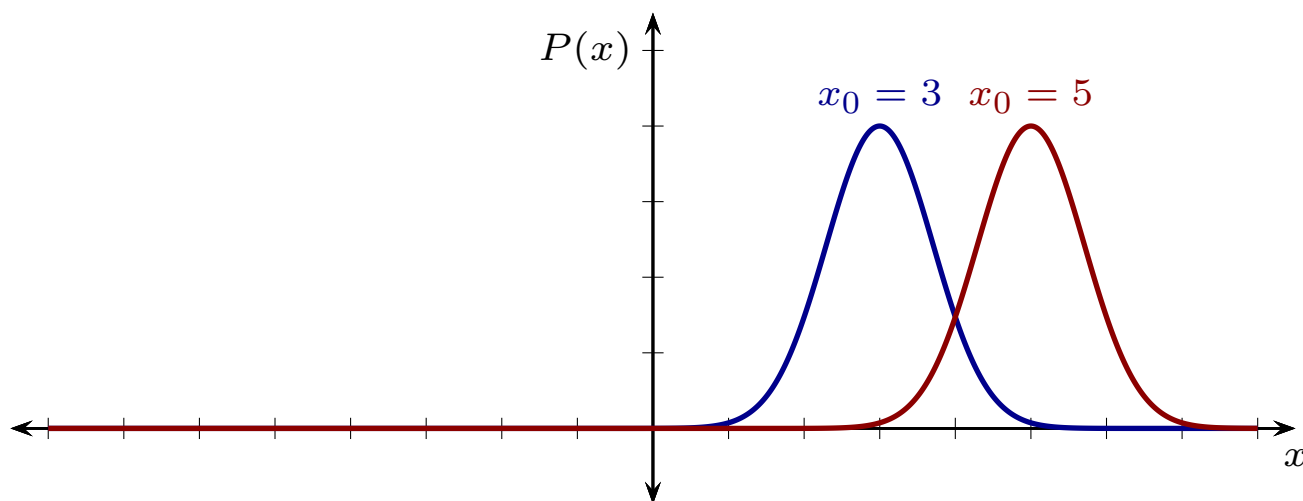
where a is a constant.

Which of the following is true about the width of the distribution?

1. Does not depend on $\bar{x}$ or a .
2. Does not depend on $\bar{x}$; increases as a increases.
3. Does not depend on $\bar{x}$; decreases as a increases.
4. Depends on $\bar{x}$ but not a .
5. Depends on $\bar{x}$; increases as a increases.
6. Depends on $\bar{x}$; decreases as a increases.

Gaussian/Normal Probability Density

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Gaussian/Normal Probability Density

$$P(x) = \frac{1}{\sqrt{2\pi} a} e^{-(x-x_0)^2/2a^2}$$

