

5/5 points (100.00%)

## ✓ Congratulations! You passed!

Next Item



1/1 point

1

The method of maximum likelihood gives the same parameter estimates as the method of least squares for any measurement noise distribution.

True



## Correct

Correct! The noise must be from the Gaussian family.



1/1 point

2.

The product of several Gaussian PDFs with identical variances is also Gaussian.



## Correct

Correct! We used this fact to derive the connection between maximum likelihood and least squares.

False



1/1 point

3.

The least squares criterion is robust to outliers.

True

False

## Correct

Correct! Least squares is particularly sensitive to outliers due to the use of squared errors!



1 / 1 point

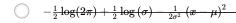
4.

For a scalar Gaussian random variable, what is the form of the full log likelihood function?

 $-\frac{1}{2} \log(2\pi) - \frac{1}{2} \log\left(\sigma^2\right) - \frac{1}{2\sigma^2} \left(x - \mu\right)^2$ 



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1/1 point

True or False,  $\operatorname{argmin}_x f(x) = \operatorname{argmax}_x f(-x)$ .



True



False

Correct

 $\text{Correct! argmin }_x\,f(x)=\operatorname{argmax}_x\,-f(x).$ 



