

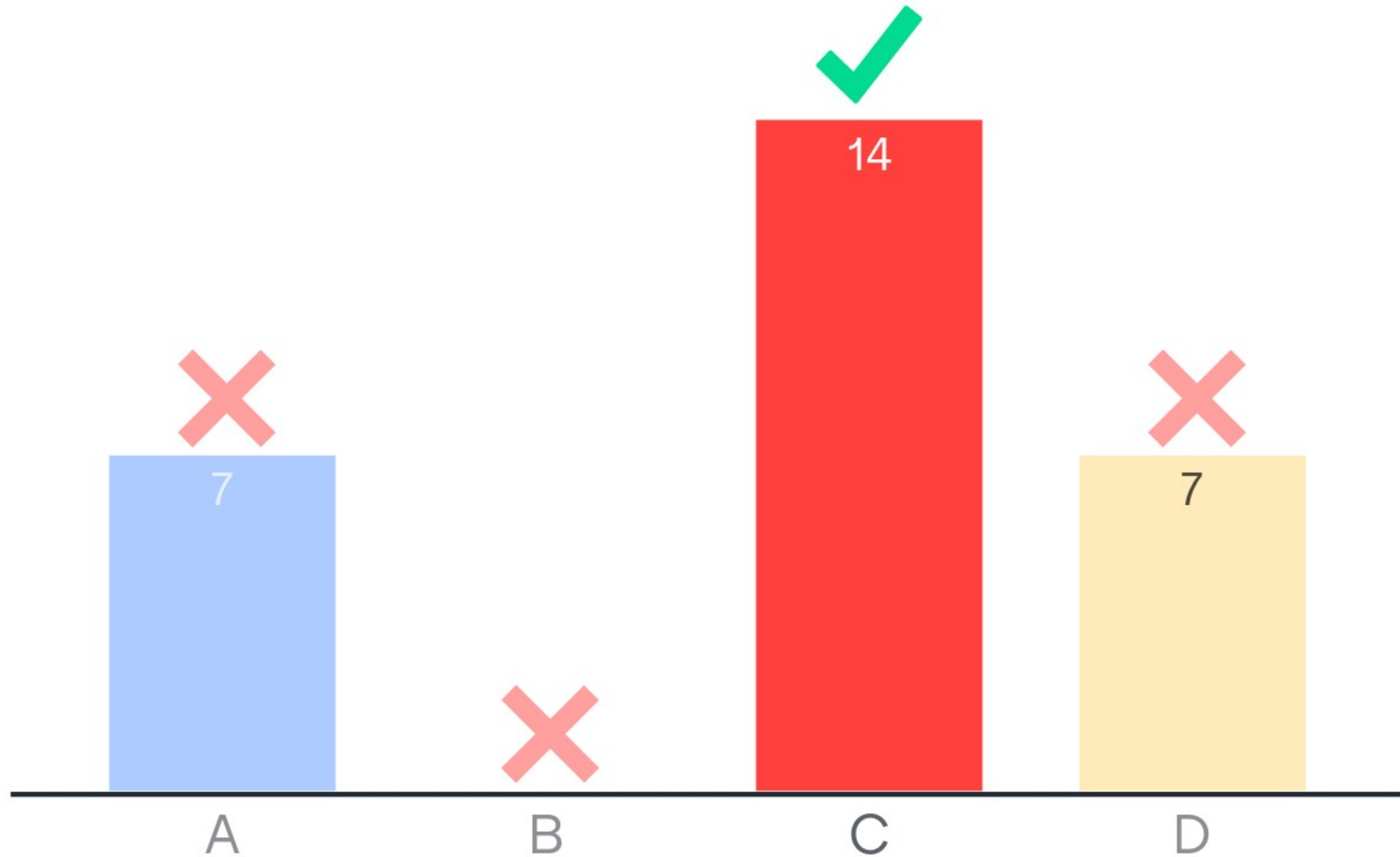
You may ask questions as we go along

3 questions
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Quiz



Logistic function (sigmoid)



Which is the logistic function?

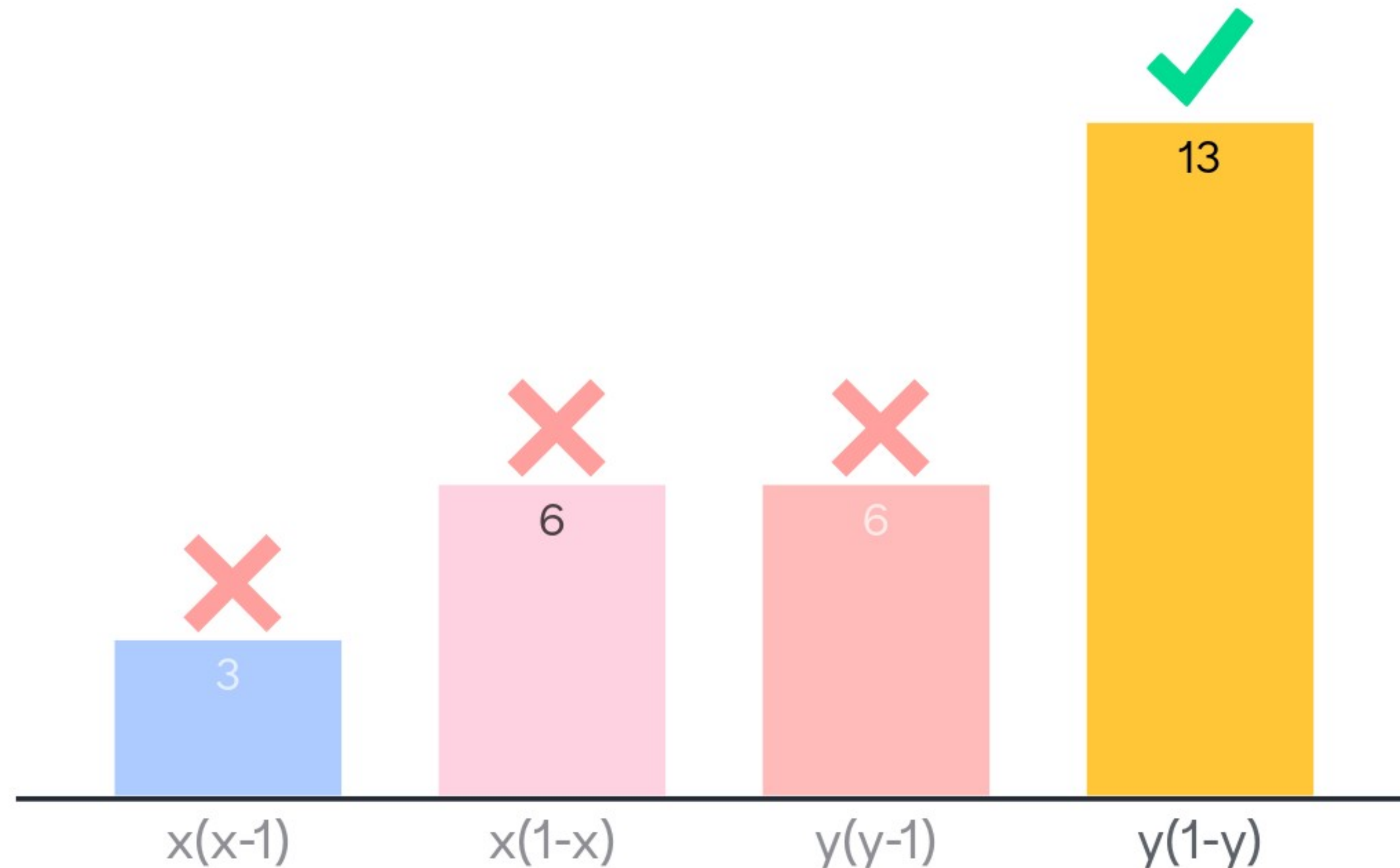
A. $y = \frac{1}{1+e^z}$

B. $y = \frac{1}{1-e^z}$

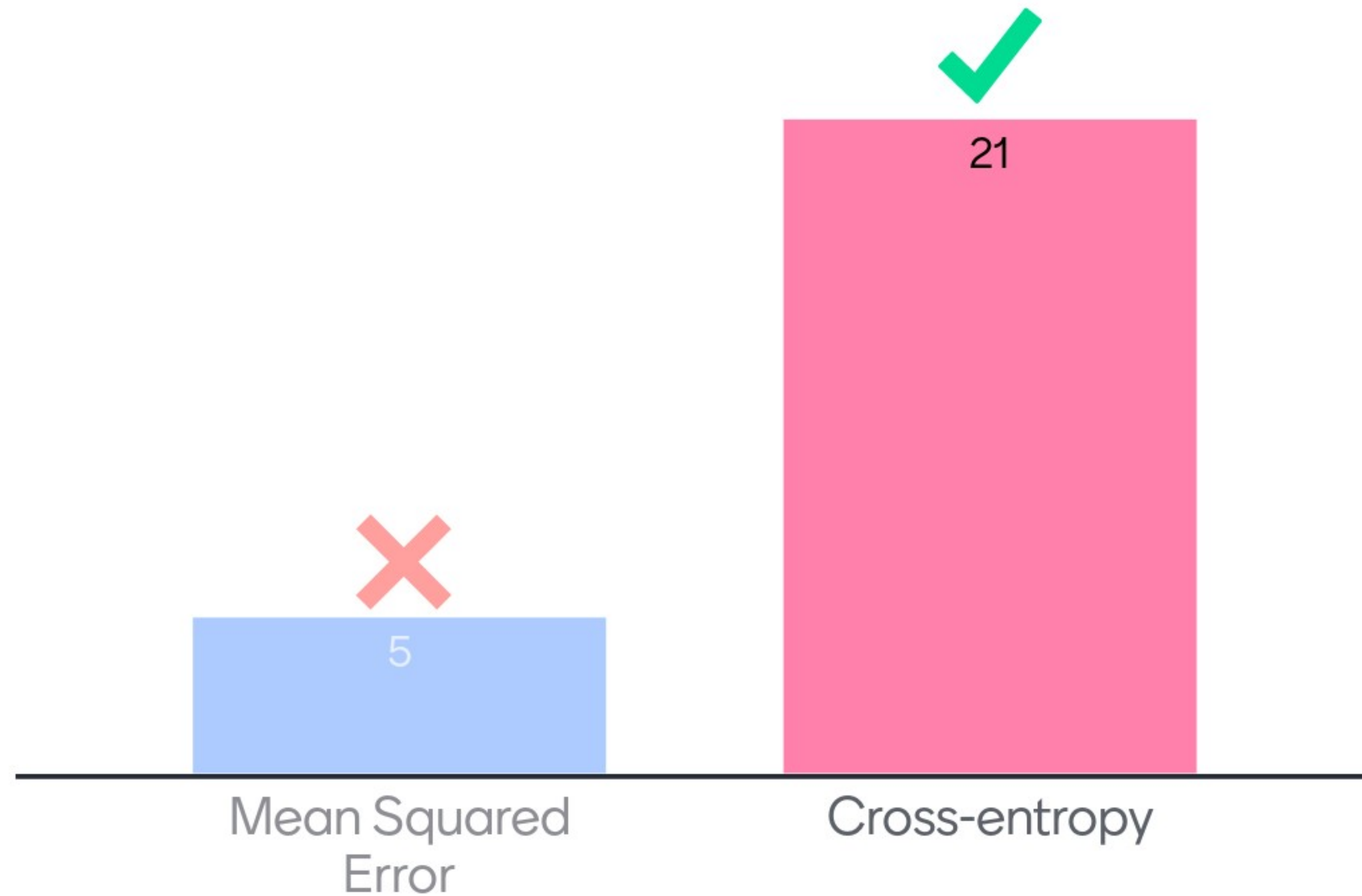
C. $y = \frac{1}{1+e^{-z}}$

D. $y = \frac{1}{1-e^{-z}}$

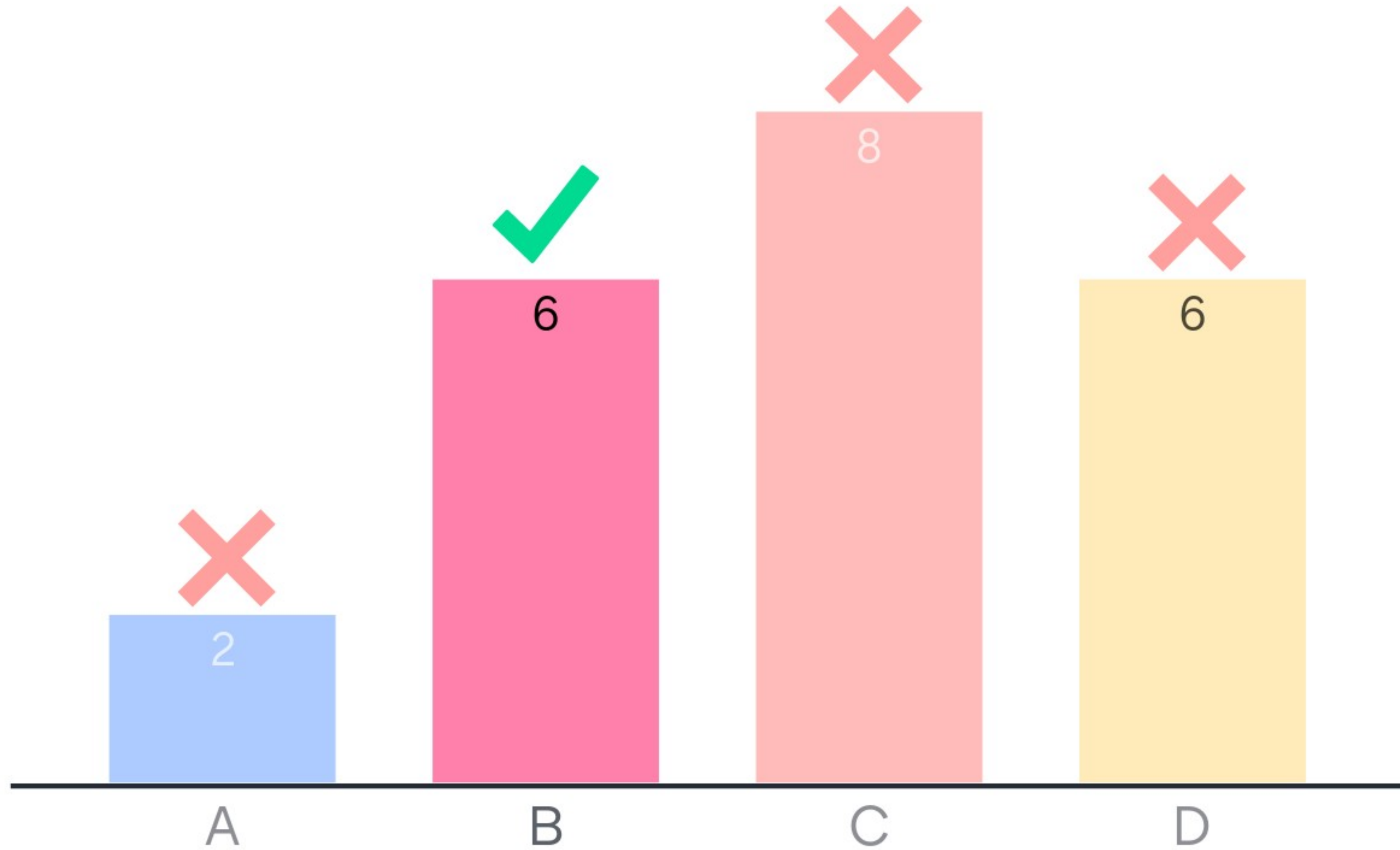
What is the derivative of the logistic function $y=1/(1+\exp(-x))$?



What is the preferred loss-function for logistic regression?



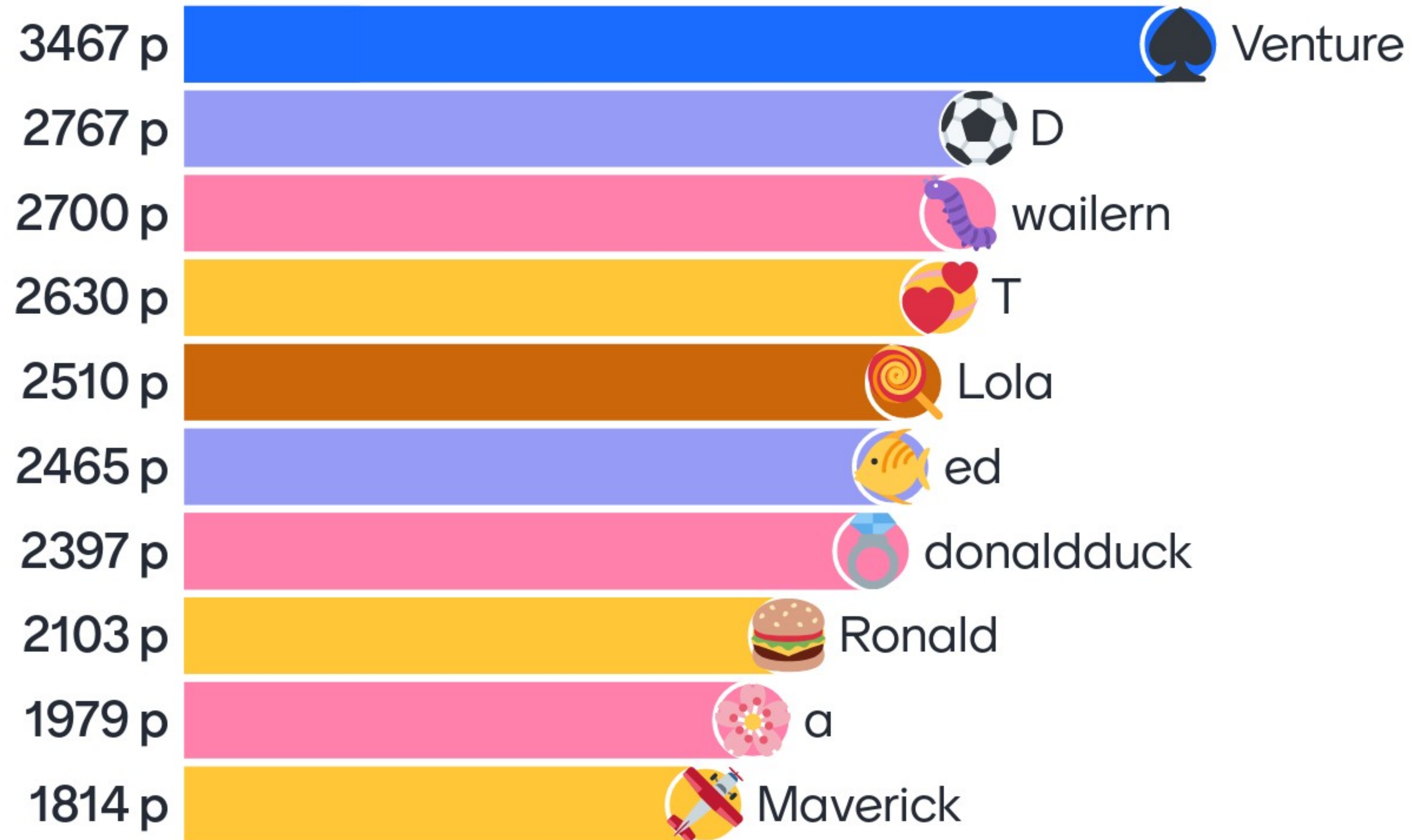
Cross-entropy loss



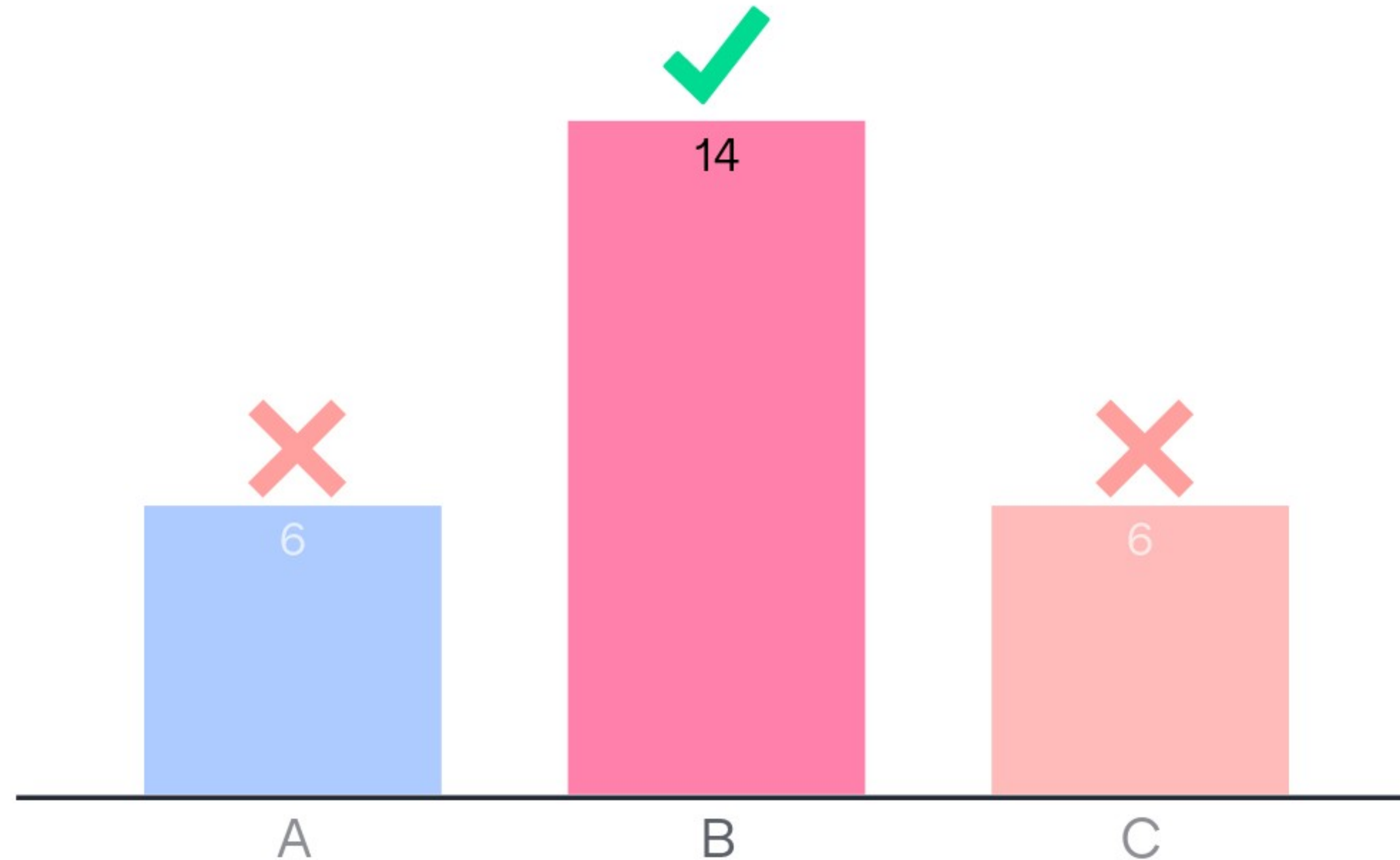
With t as target and y as predicted value, what is the cross-entropy loss?

- A. $(1 - t) \log(y) + t \log(1 - y)$
- B. $t \log(y) + (1 - t) \log(1 - y)$
- C. $y \log(t) + (1 - y) \log(1 - t)$
- D. $(1 - y) \log(t) + y \log(1 - t)$

Leaderboard



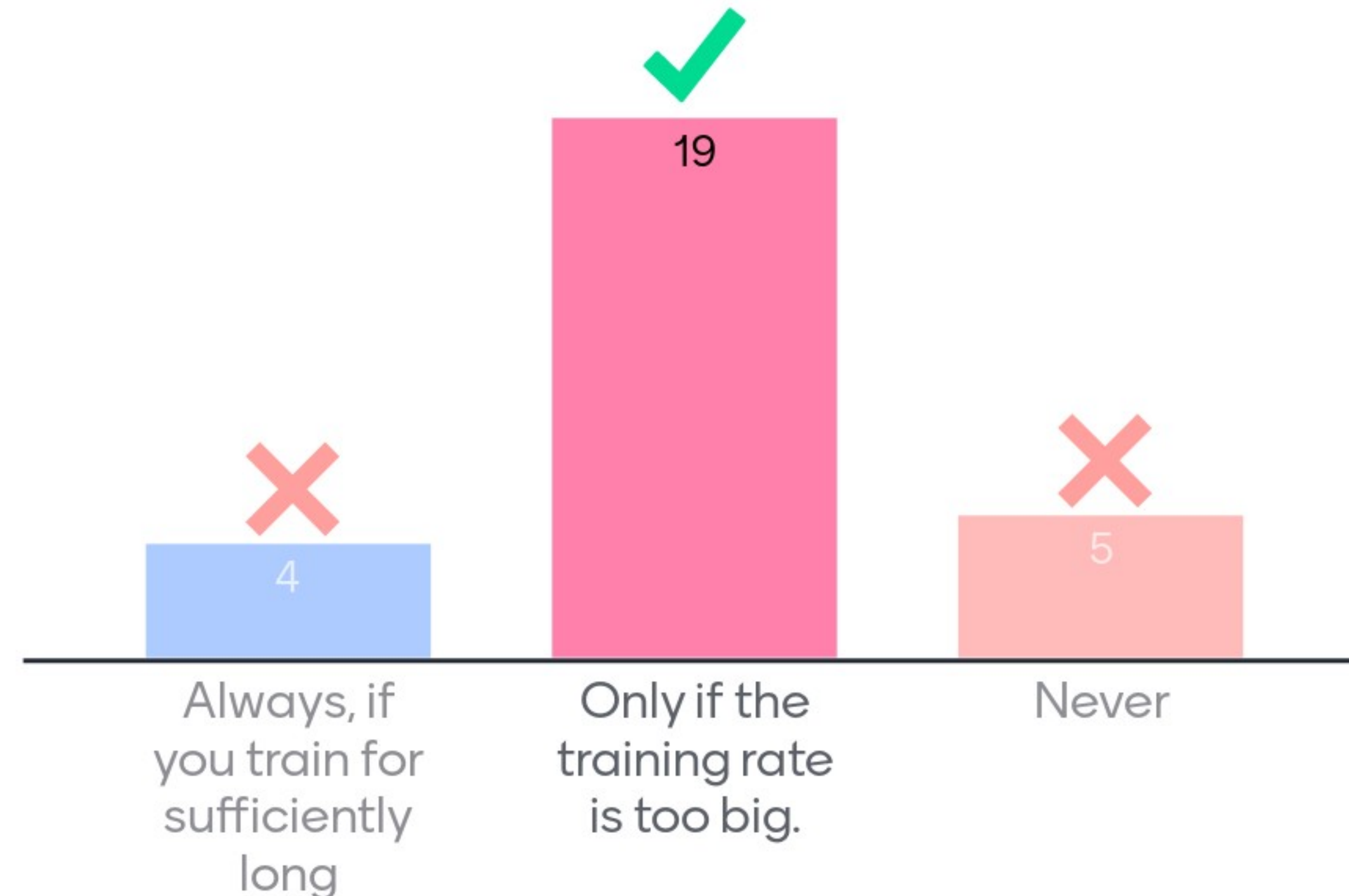
Which path describes stochastic gradient descent?



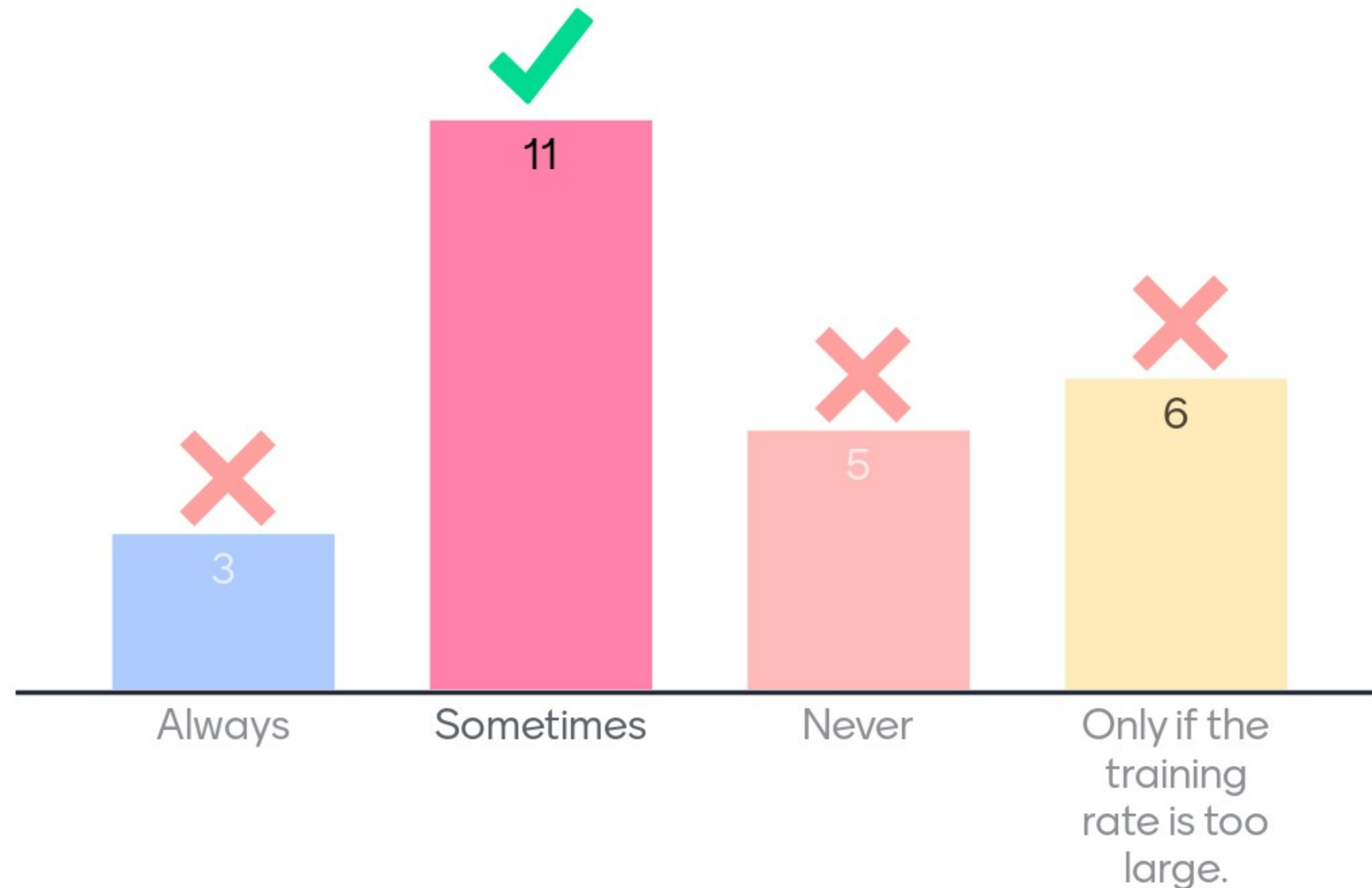


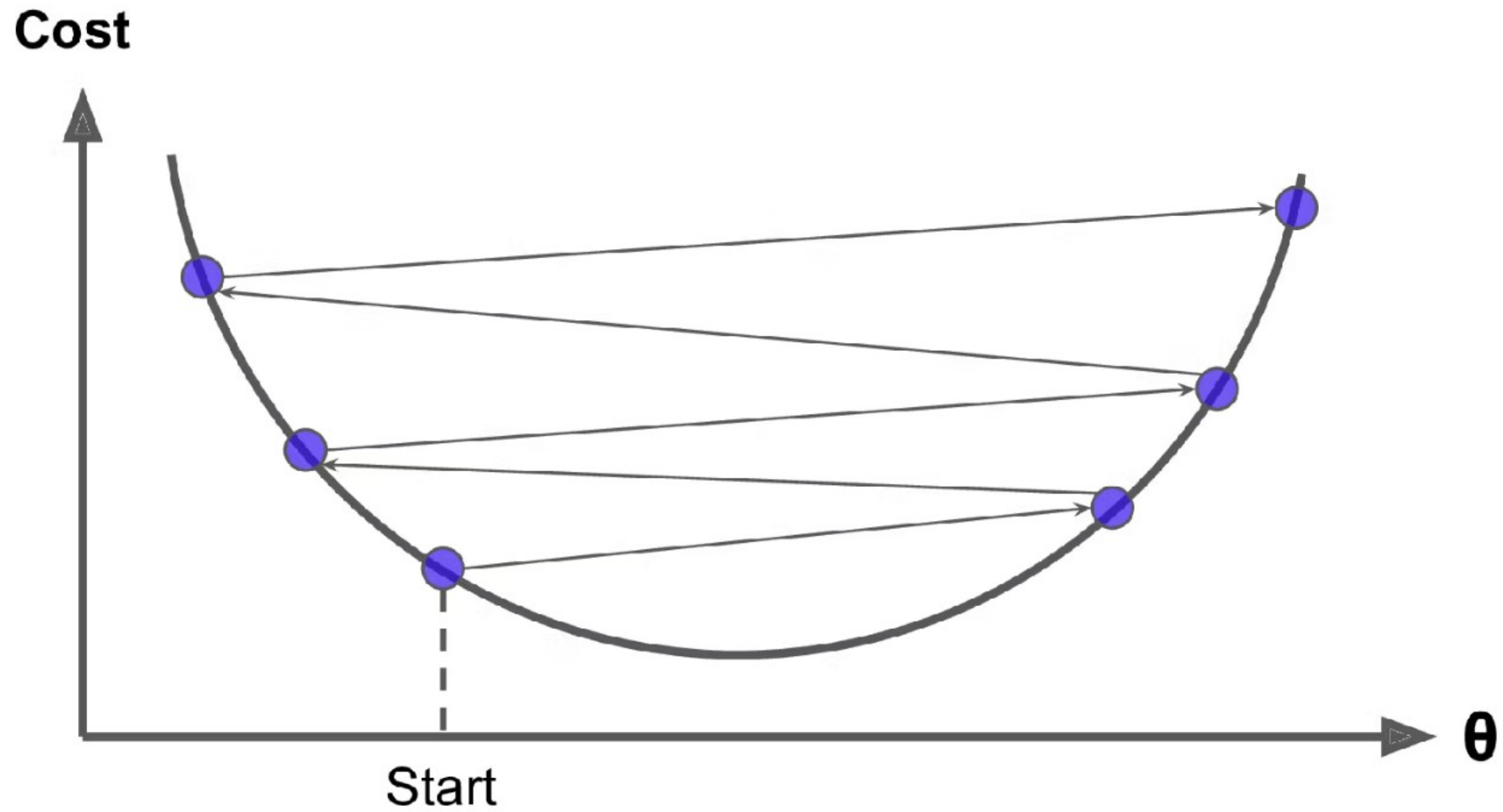
- Batch gradient descent
- Mini-batch gradient Descent
- Stochastic gradient descent

When training a multi-layer Perceptron, will the loss on the training data start to increase?



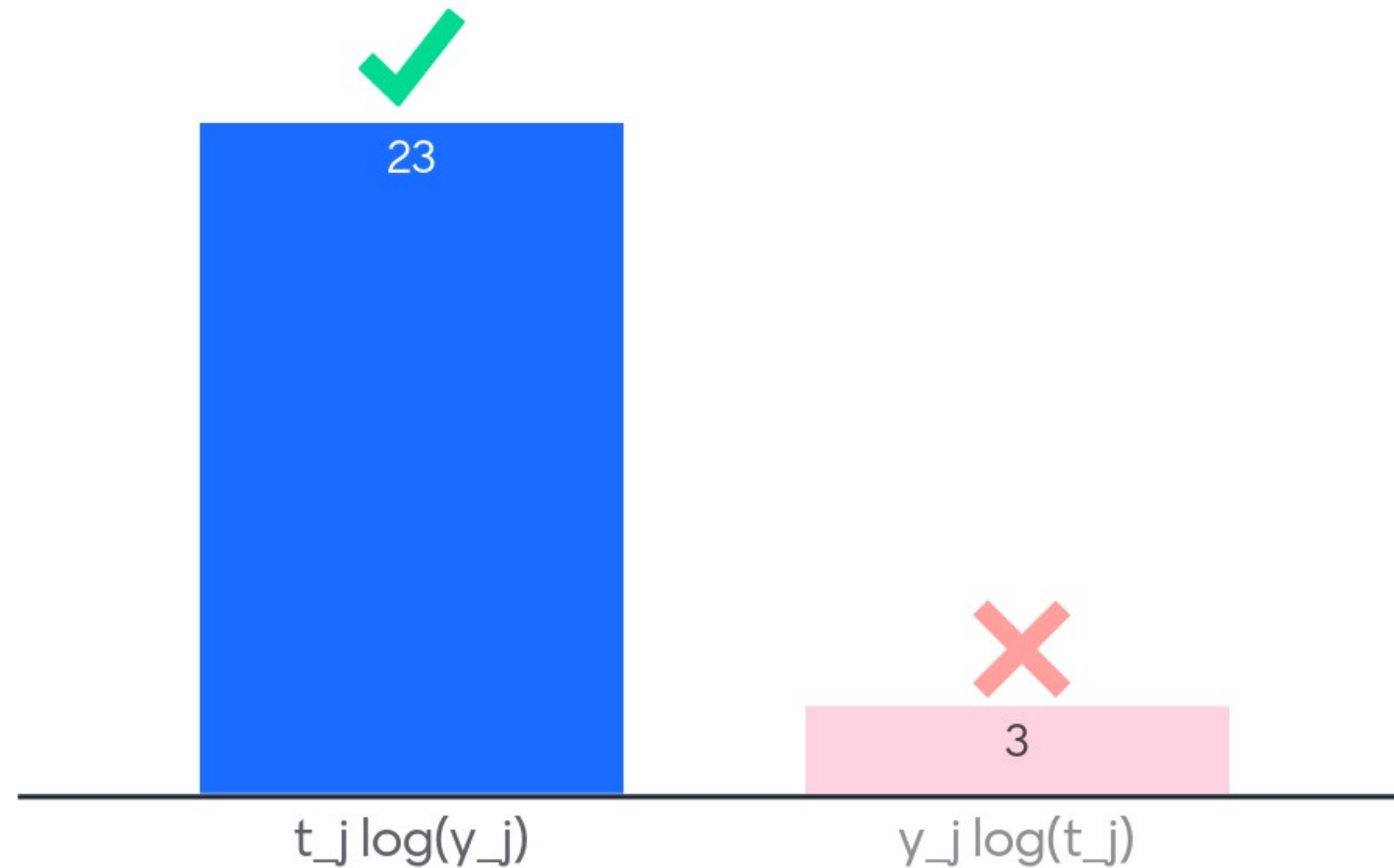
If you train for sufficiently long, will the loss on your validation data start to increase?



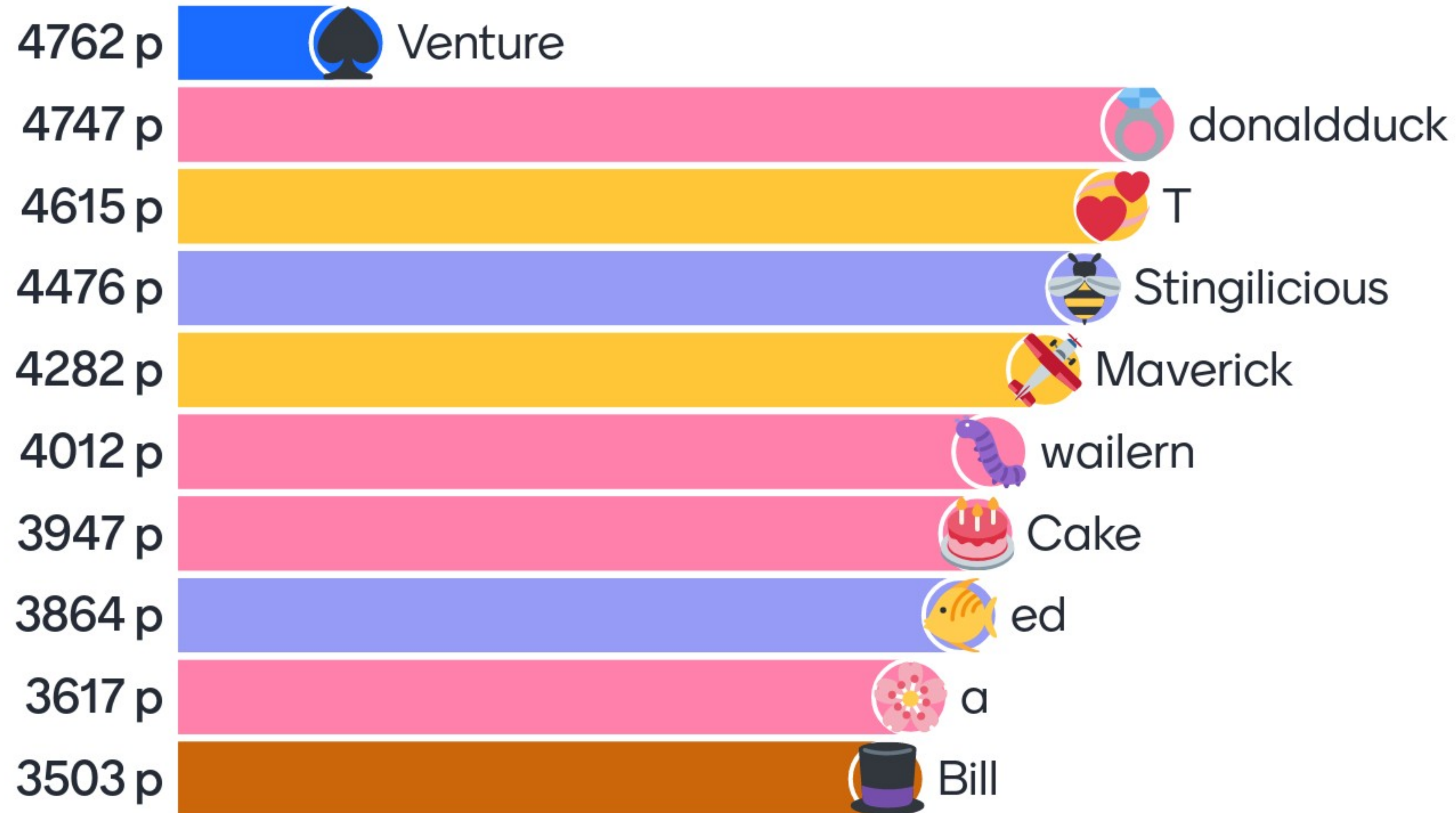


Source: Gueron Hands-on Machine Learning

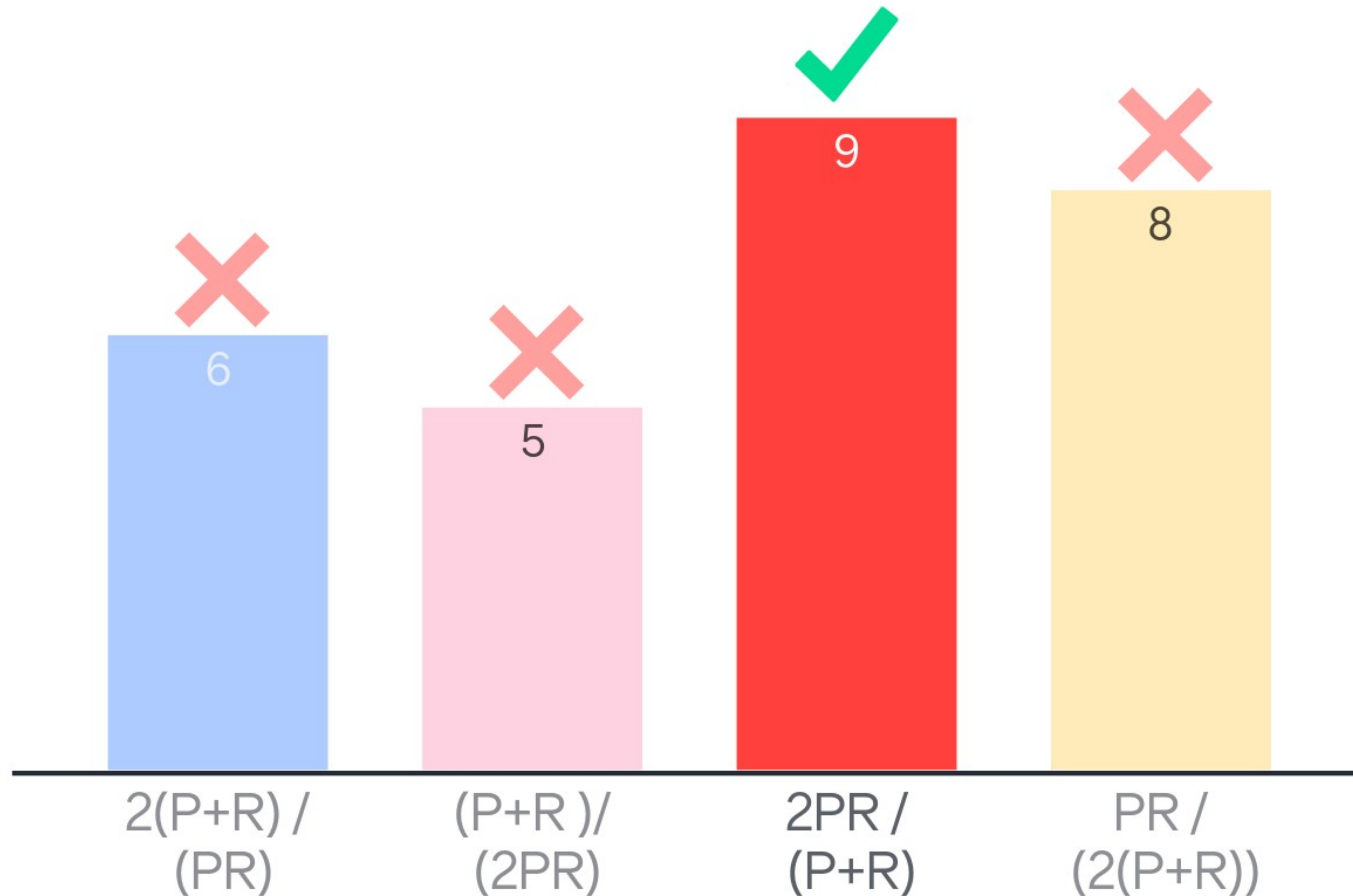
With t_j as target and y_j as predicted for item j , the cross-entropy loss is the mean over ... for all j -s.



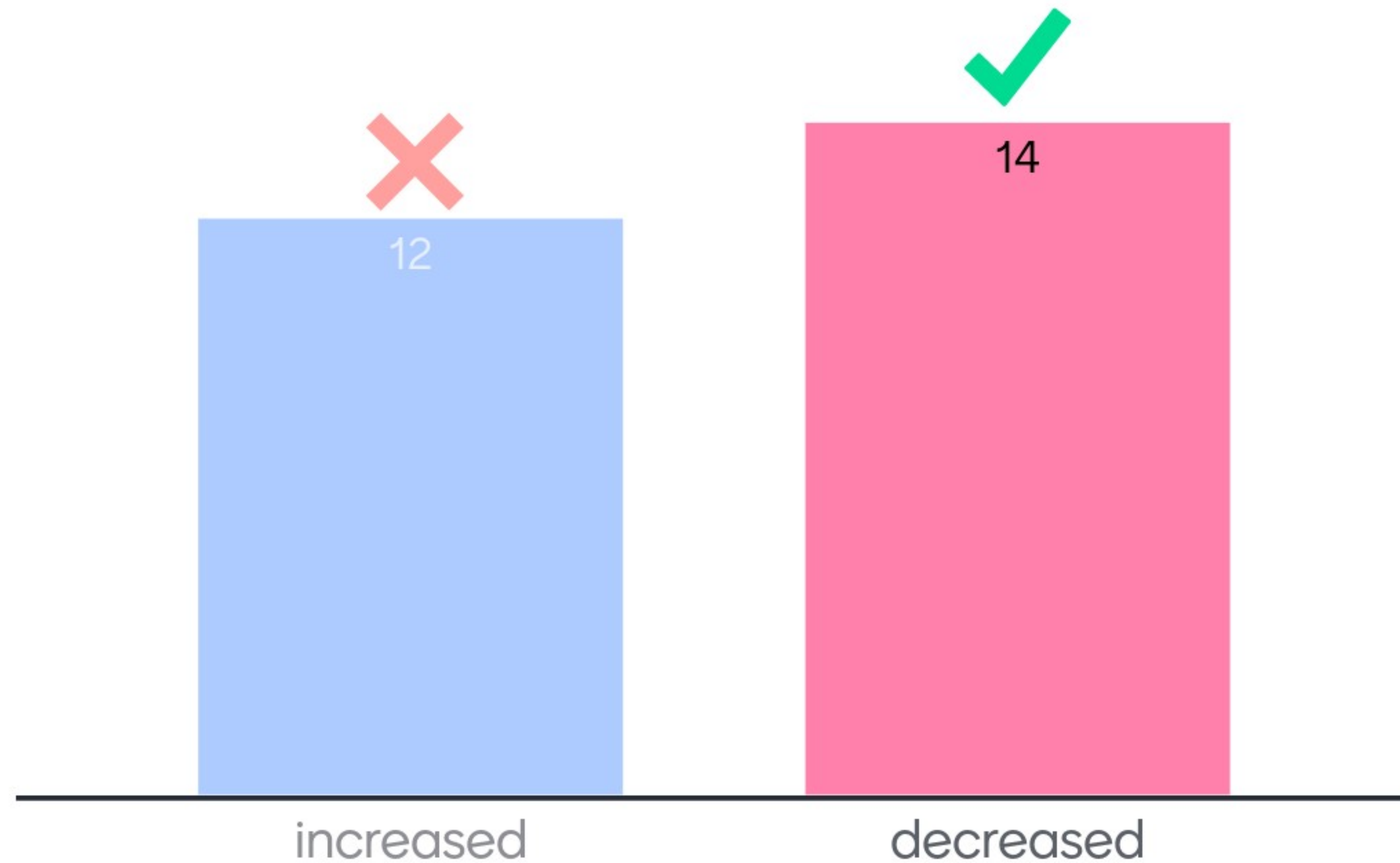
Leaderboard



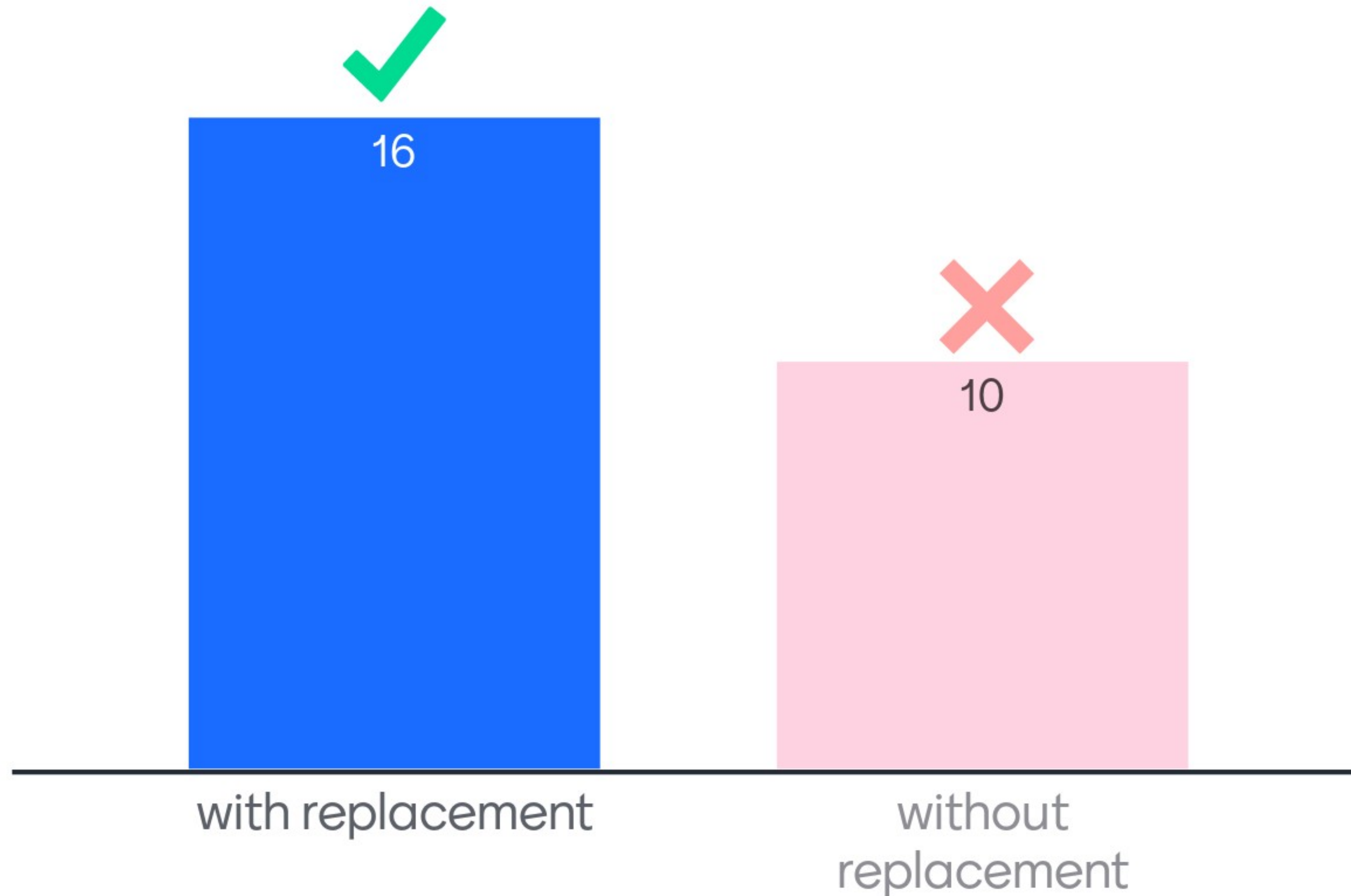
What is the F1-score?



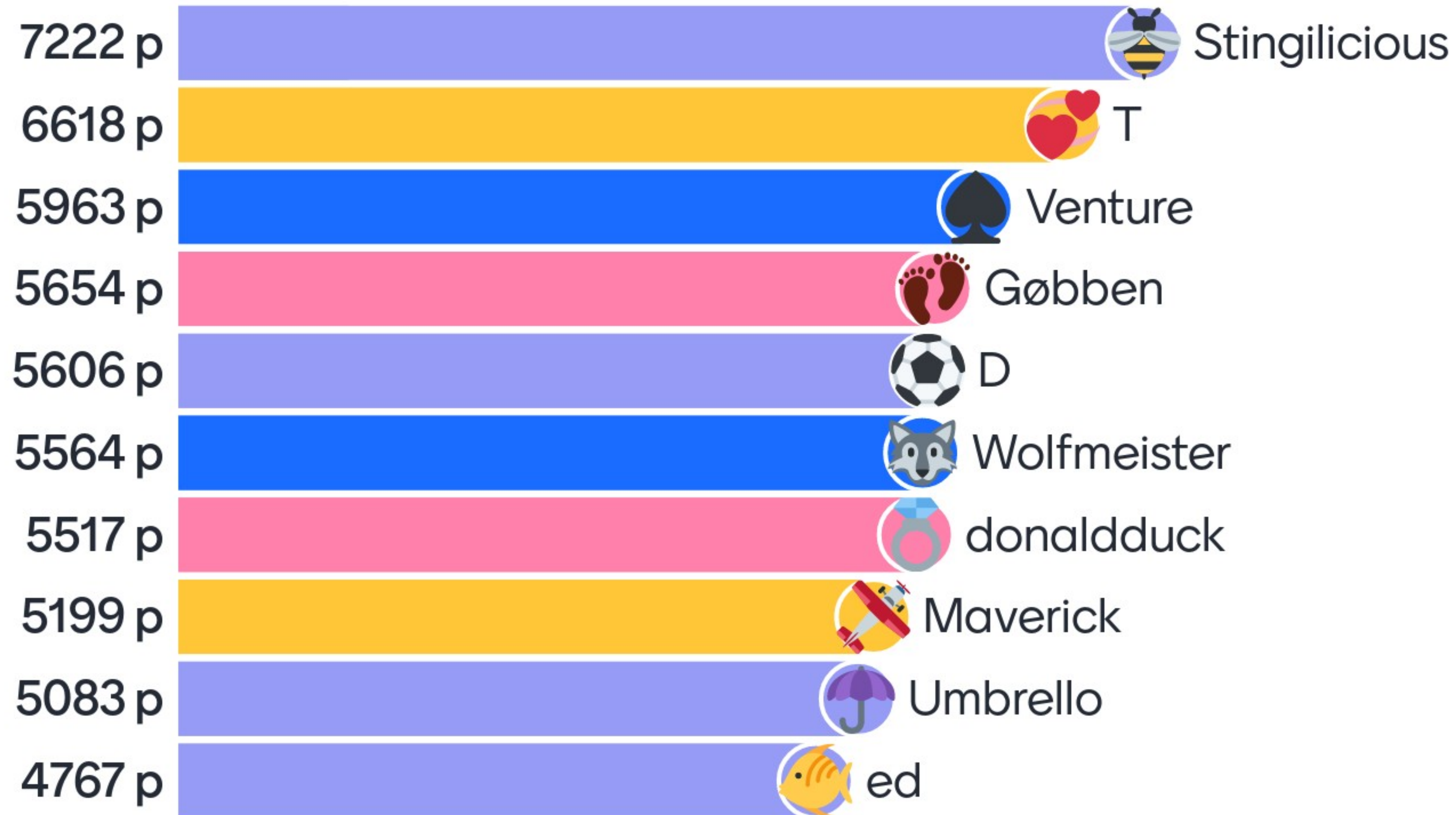
To reduce the variance for logistic regression in scikit-learn, C should be



Bootstrap sampling is done



Leaderboard



Questions?

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