

Experimental Instructions: Baseline

Facebook Experiment

Second Experiment

You have finished the first section of the survey and will receive a free movie ticket. If you complete the upcoming second section, your movie ticket will be upgraded to a **completely unrestricted one**, and you will also have the chance to earn **up to \$10 in cash**. The second section takes about **10 minutes** of your time. All cash earned is paid out as Crimson Cash, through Paypal or by check at the end of the semester.

If you stop now you can still login a second time later on and finish the second section.

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Facebook Experiment

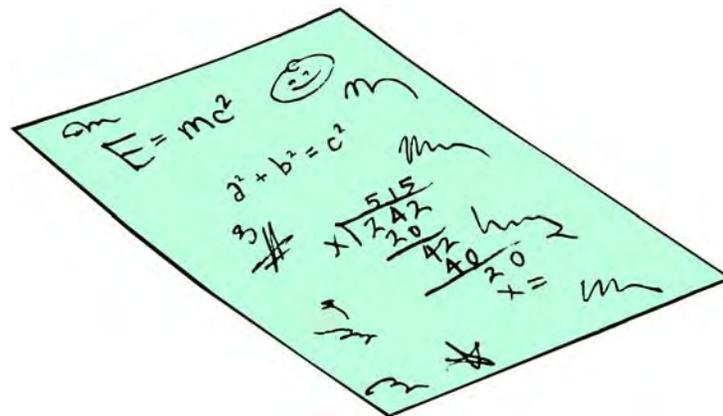
Instructions (Second Experiment)

Quiz

In a little bit, you're going to be taking a short IQ-like quiz. The quiz has 30 questions and you have 4 minutes to complete as many questions as possible.

Your score is the number of correct answers *minus* the number of incorrect answers. For each point you score, we will pay you **25 cents**.

There are 10 different versions of this quiz of varying difficulty, so you won't generally be able to compare your scores with other participants in the study.



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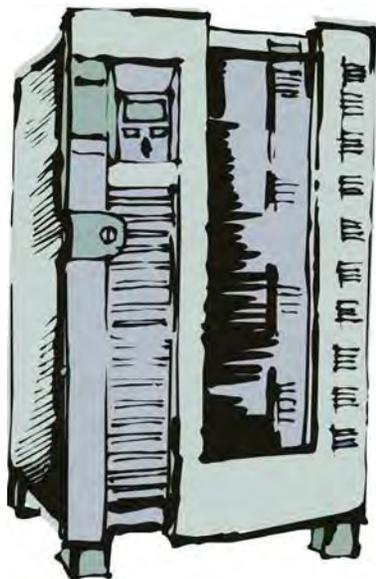
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Facebook Experiment

Instructions (Second Experiment)

Ranks



As quiz scores come in, our mainframe computer will collect all the scores from people taking the quizzes. For each version of the quiz, it will rank the scores of the people who took that quiz and calculate their percentiles. For example, if you score better than 35% of the people who take the same version of the quiz, your percentile rank would be 35.

The mainframe computer will store all the ranks and controls who is allowed to see them.

As part of this study the mainframe will be hosting two contests. The "Top Half contest" gives out prizes for scores that rank in the top half; the "Top Quarter Contest" gives out prizes for scores that rank in the top quartile (the top 25%). You will enter only **one** of these two contests - which one we cannot tell because the mainframe will randomly assign you to a contest.

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Facebook Experiment

Instructions (Second Experiment)

Meet the Robots

Imagine that you live in a world full not only of Harvard students, but also full of robots.

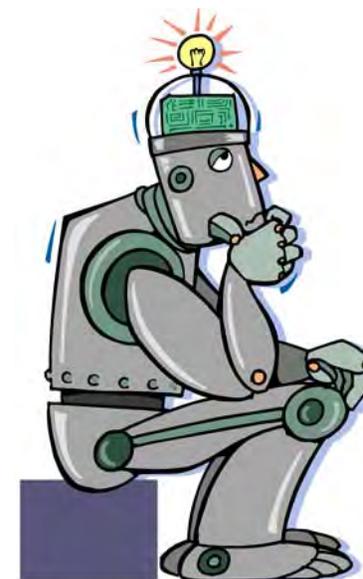
This is Bob the Robot. Bob is going to be taking the quizzes too, along with all his clones -- 100 robots in all. On average the robots are about as good at the quizzes as are Harvard students, but some are much better than others. In fact, they have been programmed so that

- Bob 1 has a 1% chance of scoring in the top half.
- Bob 2 has a 2% chance of scoring in the top half.
- ...etc...
- Bob 100 has a 100% chance of scoring in the top half.

If the mainframe enters you into the "Top Half contest" one of these robots has been assigned to be *on your team*. But we aren't going to tell you which robot it is -- it could be any of the 100 models.

If the mainframe enters you into the "Top Quarter contest" a robot from a different line will be assigned to your team - one of the new SuperBob line of robots:

- SuperBob 1 has a 1% chance of being in the top quartile (top 25% of all participants).
- SuperBob 2 has a 2% chance of being in the top quartile.
- ...etc...

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Facebook Experiment

Instructions (Second Experiment)

Payoffs

Consider the "Top Half contest". If you are entered into this contest we can use either your performance or the performance of the Bob on your team. Whichever score we use, you will earn \$3 if that score is *in the top half of all scores for your quiz*.

Similarly, in the "Top Quarter contest" we can use either your score or the score of the SuperBob on your team. Whichever score we use, you will earn \$3 if that score is *in the top quarter of all scores for your quiz*.

In both contests you have to help us decide whether to use your score or the robot's score as your team's score. We are going to ask you several times *which robot you think you are most like*. That means, *which of the 100 Bob clones is as likely as you are to score in the top half, and which of the 100 SuperBob clones is as likely as you to score in the top quartile*. We will randomly choose one of these decisions that you have made. Then, based on that decision and on the contest you are competing in, we will pick whichever member of your team is more likely to score in the top half.

For example, suppose that you say you are as good as Bob 60. If the actual robot on your team is Bob 34, then we would base your payoff in the "Top Half Contest" on your score, since you are more likely to score in the top half. But if the actual robot on your team is Bob 97, then we will use the robot's score, since the robot is more likely to score in the top half. We will do the same thing for the "Top Quarter contest" -- if you are more likely than the SuperBob on your team to score in the top quartile, we will enter your score.

The bottom line is that you are most likely to win \$3 if you are as accurate as possible when you estimate your probability of scoring in the top half and your probability of scoring in the top quartile, and pick the corresponding Bob and SuperBob.


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Facebook Experiment

Second Experiment

Which Bob are you?

Before you take the quiz, please tell us for the first time which Bob you think you are most like. Remember, Bob X has an X% chance of scoring in the top half on the quiz, so you are in effect estimating the probability that you will score in the top half. You are most likely to win \$3 in the "Top Half Contest" if you are as accurate as possible.

"I am as likely to score in the top half as Bob . "

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Facebook Experiment

Second Experiment

Which Bob are you?

Before you take the quiz, please tell us for the first time which Bob you think you are most like. Remember, Bob X has an X% chance of scoring in the top half on the quiz, so you are in effect estimating the probability that you will score in the top half. You are most likely to win \$3 in the "Top Half Contest" if you are as accurate as possible.

"I am as likely to score in the top half as Bob . (who scores in the top half with probability 66%)"

Also, please tell us which SuperBob you think you are most like. Remember, SuperBob X has an X% chance of scoring in the top quartile on the quiz, so you are in effect estimating the probability that you will score in the top quartile. You are most likely to win \$3 if you are entered in the "Top Quarter contest" if you are as accurate as possible.

"I am as likely to score in the top quartile (top 25%) as SuperBob . (who scores in the top quartile with probability 53%)"

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Facebook Experiment

Second Experiment

Quiz starts now ...

When you press "Next Page" the quiz will start and you have four minutes to answer as many questions as you can. There are up to 30 questions. Your score is the number of correct answers *minus* the number of incorrect answers. We will pay you **25 cents** for each point you score, (and you cannot lose money).

If you close this browser window now you can login in and get to this page by simply following the link in the invitation email we sent.

Good luck!

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Facebook Experiment Quiz

In the following screens you will be asked up to 30 questions. Answer as many questions as possible within the next 4 minutes.

Question 1: Which one of the five choices makes the best comparison? LIVED is to DEVIL as 6323 is to:

- 2336
- 6232
- 3236
- 3326
- 6332

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Facebook Experiment

Question 2: Which one of these five is least like the other four?

Horse

Kangaroo

Cow

Deer

Donkey

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Facebook Experiment

Question 7: A fallacious argument is:

Disturbing

Valid

False

Necessary

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Facebook Experiment

Second Experiment

Reevaluate your probability of being in the top half and top quarter

Now that you have taken the quiz, you may have a better idea where you are likely to rank. Please think again about which Bob you are most like. Remember, if you are most like Bob X this means that you have an X% chance of scoring in the top half. You are most likely to win \$3 in the "Top Half Contest" if you are as accurate as possible.

"I am as likely to score in the top half as Bob . "

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Facebook Experiment

Second Experiment

Reevaluate your probability of being in the top half and top quarter

Now that you have taken the quiz, you may have a better idea where you are likely to rank. Please think again about which Bob you are most like. Remember, if you are most like Bob X this means that you have an X% chance of scoring in the top half. You are most likely to win \$3 in the "Top Half Contest" if you are as accurate as possible.

"I am as likely to score in the top half as Bob . (who scores in the top half with probability 60%)"

Also, please tell us which SuperBob you think you are most like. Remember, SuperBob X has an X% chance of scoring in the top quartile on the quiz, so you are in effect estimating the probability that you will score in the top quartile. You are most likely to win \$3 if you are entered in the "Top Quarter contest" if you are as accurate as possible.

"I am as likely to score in the top quartile (top 25%) as SuperBob . (who scores in the top quartile with probability 33%)"

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Facebook Experiment

Second Experiment

Robots Gather Feedback



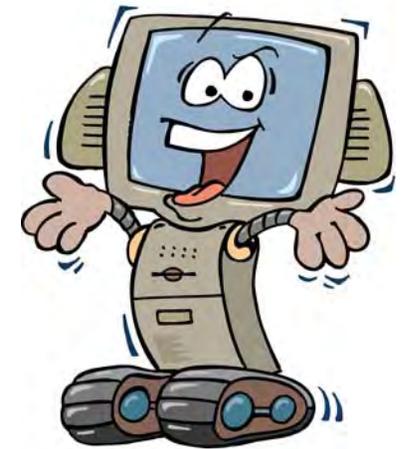
Wise Fred

Now that you have taken the quiz and given us some information about how well you think you did, we are going to give you some feedback on your performance. Specifically, we are going to give you a series of four reports that say "top" or "bottom". The reports are meant to indicate whether your performance was in the top or bottom half, but *unfortunately they are not always accurate*.

The problem is that the information about your rank is stored on the mainframe, and we had to hire two robots to retrieve the information. The robots we hired are named Joke Fred and Wise Fred. Wise Fred is completely reliable and always retrieves the right report. Unfortunately, Joke Fred is completely unreliable. If a report was retrieved by Joke Fred it is equally likely to say "top" or "bottom" no matter what your real rank was.

Each of the four reports you will get is equally likely to have been retrieved by Wise Fred or by Joke Fred. This means that there is a 75% chance that each report is accurate, but a 25% chance that it is inaccurate.

After each report we will again ask which Bob you think you are most like, i.e. what you think is the probability that you scored in the top half.



Joke Fred

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Facebook Experiment

Second Experiment

Feedback #1

Your first report says BOTTOM.

You last decided that you are most like Bob 60.

Given this feedback, which Bob do you think you are most like? Remember, there is a 50% chance that Wise Fred retrieved this report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 in the "Top Half Contest" if you answer as accurately as possible.

"I am as likely to score in the top half as Bob . (who scores in the top half with probability 55%)"

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Facebook Experiment

Second Experiment

Feedback #2

Your second report says TOP.

Your first report said BOTTOM.

You last decided that you are most like Bob 55.

Given all the feedback you have received so far, which Bob do you think you are most like? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 in the "Top Half Contest" if you answer as accurately as possible.

"I am as likely to score in the top half as Bob . "

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Facebook Experiment

Second Experiment

Feedback #3

Your third report says TOP.

Your first two reports said BOTTOM, TOP.

You last decided that you are most like Bob 61.

Given all the feedback you have received so far, which Bob do you think you are most like? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 in the "Top Half Contest" if you answer as accurately as possible.

"I am as likely to score in the top half as Bob ." "

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Facebook Experiment

Second Experiment

Feedback #4

Your fourth (and final) report says TOP.

Your first three reports said **BOTTOM, TOP, TOP.**

You last decided that you are most like **Bob 80.**

Given all the feedback you have received so far, which Bob do you think you are most like? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 in the "Top Half Contest" if you answer as accurately as possible.

"I am as likely to score in the top half as Bob ."

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Facebook Experiment

Second Experiment

Buying Information

You are almost done! Before you finish, you have an opportunity to win an extra \$2.

Imagine that there is a safe deposit box with your name on it hidden deep in the basement of Littauer. There is \$2 in each box. To get the money, you need to hire a robot to go open the box and retrieve the money. But to unlock the safe deposit box, the robot will first need to visit the mainframe and find out whether you scored in the top half or bottom half; the robot needs this information to unlock your box.

The robots available for hire are all reliable and will open the box and bring you the money it contains. But the robots also differ from each other in two ways. First, some robots are more precise than others:

- **Silent Joe** only tells you if he finds the money but does not tell you what he learned from the mainframe about your rank.
- **Talking Joe** looks for the money, but also tells you if you were in the top or bottom half, regardless of whether or not he finds money.
- **Precise Joe** is a stickler for accuracy and will find out your exact rank from the mainframe. He will tell you not only whether he finds any money, but also your precise rank among all students who took the same quiz as you.

The second way in which the robots differ is how they tell you about your rank. Of course, Silent Joe never says anything. On the other hand, Talking and Precise Joe can either send an email to you alone *or* they can post the information they get about your rank to an online hall of fame and send a link to you and to your friends (the friends you named in the trivia game last fall). In this case you and your friends can all see your performance and compare it to others.

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Facebook Experiment

Second Experiment

Buying Information

To summarize, there are five possible robots:

Silent Joe

- brings you \$2
- tells you nothing about your rank.

Talking Joe

- brings you \$2
- sends **you** an email to inform you whether your score was in the *top or bottom half*

Talking "Hall of Fame" Joe

- brings you \$2
- invites you and your friends to view and compare your *top or bottom rank* in your group's hall of fame.

Precise Joe

- brings you \$2
- sends **you** an email about your *exact rank (1-100)*.

Precise "Hall of Fame" Joe

- brings you \$2
- invites you and your friends to view and compare your *exact rank* in your group's hall of fame.

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Facebook Experiment

Second Experiment

Buying Information

On the next page you can hire the services of ONE of the five robots. We don't know which one is available to help you find out about your score and your \$2 - the computer will choose one and only one of them when the time comes. The computer will also offer the robot at a price which is random and drawn between \$0 and \$4.

Please tell us - for each robot - **the highest amount you would be willing to pay to hire that robot**. This amount indicates the value of the robot to you - if the robot is worth, say, \$2 then you should be prepared to pay up to \$2 but not more than that.

For example, if you say that you willing to pay up to \$2 for Silent Bob and the computer chooses Silent Bob at a price of \$1 then you will hire Silent Bob at \$1. But if the computer draws a price of \$3 for Silent Bob then this price exceeds your value for Silent Bob and you will not hire a robot.

NOTE: If you hire a robot then the price of the robot will be subtracted from your earnings and the \$2 in the safety deposit box will be added to your earnings. If you don't ever want to hire a specific robot then simply bid \$0.

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Facebook Experiment

Second Experiment

Buying Information

Silent Joe is worth paying up to \$.

- brings you \$2
- tells you nothing about your rank.

Talking Joe is worth paying up to \$.

- brings you \$2
- sends **you** an email to inform you whether your score was in the *top or bottom half*

Talking "Hall of Fame" Joe is worth paying up to \$.

- brings you \$2
- invites you and your friends to view and compare your *top or bottom rank* in your group's hall of fame.

Precise Joe is worth paying up to \$.

- brings you \$2
- sends **you** an email about your *exact rank (1-100)*.

Precise "Hall of Fame" Joe is worth paying up to \$.

- brings you \$2
- invites you and your friends to view and compare your *exact rank* in your group's hall of fame.

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Facebook Experiment

Debriefing

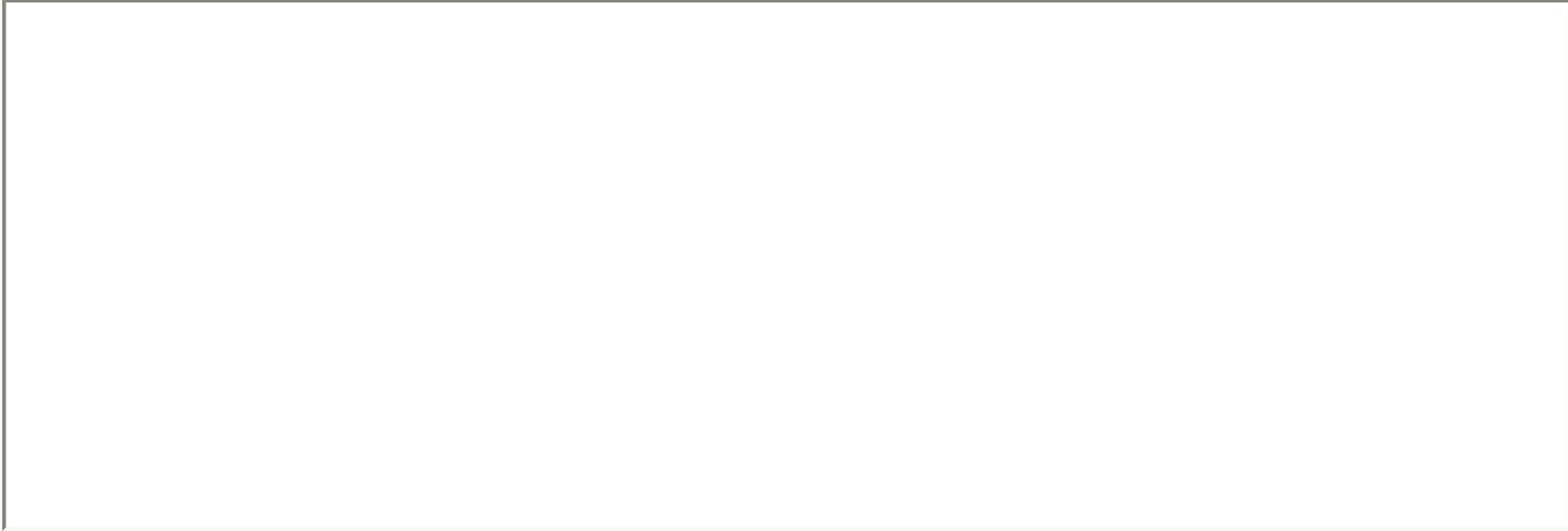
What do you think?

Thank you! We would be grateful for any quick comments on the first and second part of the study. Did you feel comfortable with instructions? Were you confused? If you have suggestions on what to do better we would be very grateful! Thanks in advance!

Feedback on first experiment:



Feedback on second experiment:



Facebook Experiment

This part of the study is finished.

Thank you for participating. You can pick up your unrestricted movie ticket at the Science Center starting the week of April 25 (signs will be posted). Cash earnings will be calculated and paid at the end of the semester as Crimson Cash, Paypal or by check.

Have a nice day!

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Experimental Instructions: Followup

Bonus Experiment

And Now For Something Completely Different ...

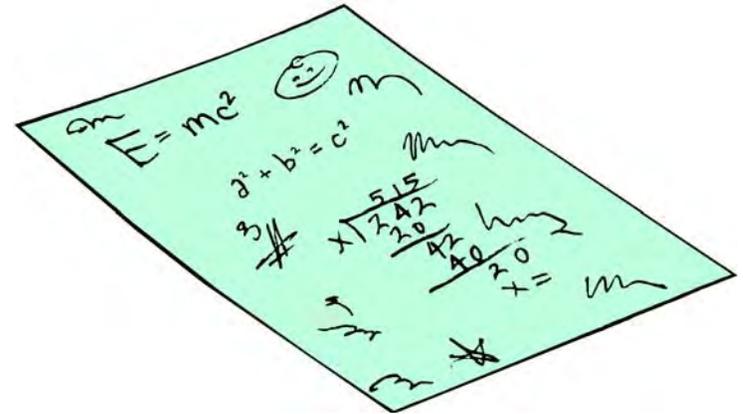
Remember that IQ Quiz you took in April?

The character games are over and the bonus experiment almost finished.

We just ask you a few more follow-up questions to the IQ-like quiz you took in April when we asked you to answer as many question as possible within a 4 minute interval. We will send your score and a summary of the earnings from that experiment in an email during the next 7 days.

You might remember that after the quiz we asked you how likely you thought it was that you scored in the top half of all participants who took the same test. We also provided some feedback on your performance and asked you to reevaluate the probability that you score amongst the top half of all students after each feedback.

Today we will give you feedback not on your own performance but instead on the performance of **Oscar** - a robot who loves quizzes just as much as you do!



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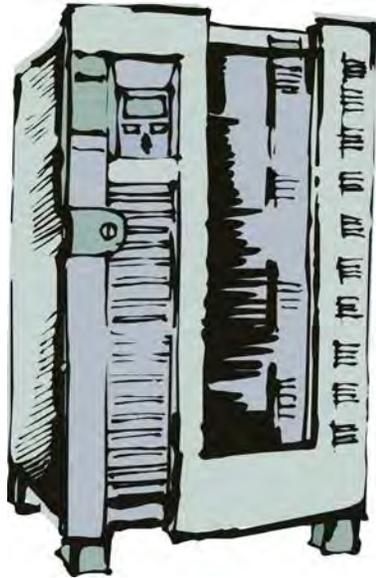
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Bonus Experiment

And Now For Something Completely Different ...

How good is Oscar?



Oscar has the following chance of being in the top half:

There is a **10 per cent** chance that Oscar scores in the top half among all participants in the quiz. This means in **10 out of 100 cases** Oscar will score in the top half.

Only our mainframe computer knows Oscar's actual score.

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Bonus Experiment

And Now For Something Completely Different ...

Joke Fred and Wise Fred Gather Feedback

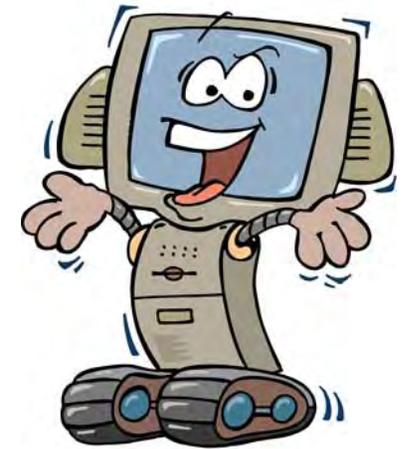


Wise Fred

Now that you know that Oscar scores in the top half with **10 percent** probability we will give you some more feedback on Oscar's performance in this particular quiz. Specifically, we are going to give you a series of four reports that say "top" or "bottom". The reports are meant to indicate whether Oscar's performance in *this quiz* was in the top or bottom half, but *unfortunately they are not always accurate*.

The problem is that the information about Oscar's performance is stored on the mainframe, and we had to hire two robots to retrieve the information. The robots we hired are named Joke Fred and Wise Fred. Wise Fred is completely reliable and always retrieves the right report. Unfortunately, Joke Fred is completely unreliable. If a report was retrieved by Joke Fred it is equally likely to say "top" or "bottom" no matter what your real rank was.

Each of the four reports you will get is equally likely to have been retrieved by Wise Fred or by Joke Fred. This means that there is a 75% chance that each report is accurate, but a 25% chance that it is inaccurate.



Joke Fred

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Bonus Experiment

And Now For Something Completely Different ...

Compare Oscar to Trusty Bob



After each feedback we ask you to reevaluate the chance that Oscar is among the top half. We simply ask you to compare Oscar's chance of being in the top half with your trusty Bob's chance of scoring in the top half. As usual, Bob is programmed to be in the top half with a probability between 1 and 100 percent.

We will select one of your decisions and add **\$3** to your earnings if the robot you think is the better robot (trusty Bob or Oscar) actually scores in the top half.

The bottom line is that you are most likely to win \$3 if you always estimate as accurately as possible Oscar's chance of scoring in the top half. That means, you should compare Oscar to the 'Bob' who has the same chance as Oscar to score in the top half.

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Bonus Experiment

And Now For Something Completely Different ...

Feedback #1

Your first report says BOTTOM.

We told you that Oscar's score is in the top half with probability **10 per cent**.

Given this feedback how likely is it that Oscar is actually in the top half? Remember, there is a 50% chance that Wise Fred retrieved this report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 if you answer as accurately as possible.

"Oscar is as likely to score in the top half as Bob . (who scores in the top half with probability 4%)"

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Bonus Experiment

And Now For Something Completely Different ...

Feedback #2

Your second report says BOTTOM.

Your first report said BOTTOM.

You last decided that Oscar is most like Bob 4.

Given all the feedback you have received so far, how likely is it that Oscar is actually in the top half? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 if you answer as accurately as possible.

"Oscar is as likely to score in the top half as Bob 10 . (who scores in the top half with probability 10%)"

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Bonus Experiment

And Now For Something Completely Different ...

Feedback #3

Your third report says BOTTOM.

Your first two reports said BOTTOM, BOTTOM.

You last decided that Oscar is most like Bob 10.

Given all the feedback you have received so far, how likely is it that Oscar is actually in the top half? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 if you answer as accurately as possible.

"Oscar is as likely to score in the top half as Bob 12 .(who scores in the top half with probability 12%)"

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Bonus Experiment

And Now For Something Completely Different ...

Feedback #4

Your fourth (and final) report says BOTTOM.

Your first three reports said BOTTOM, BOTTOM, BOTTOM.

You last decided that Oscar is most like Bob 12.

Given all the feedback you have received so far, how likely is it that Oscar is actually in the top half? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 if you answer as accurately as possible.

"Oscar is as likely to score in the top half as Bob 17 .(who scores in the top half with probability 17%)"

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Bonus Experiment

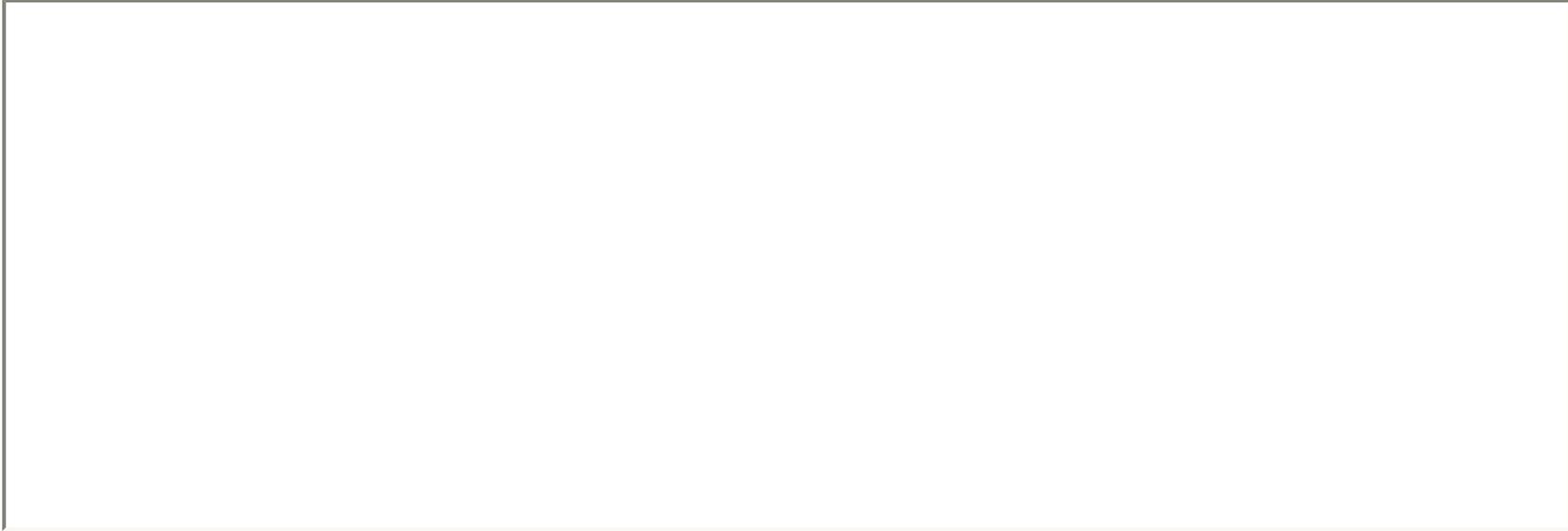
Mailing Address

Paypal or Check

Thank you!

Please write the mailing address where we should send your earnings from this study. You can also specify a PayPal account.

We would be grateful for any quick comments on this study. Thanks in advance! Did you feel comfortable with instructions? Were you confused? Do you have suggestions of how to say something more clearly? We are particularly interested if you understood clearly when you would be paid according to piece rate and when you would be paid according to tournament rate.



Bonus Experiment

This part of the study is finished.

Thank you for participating. We'll add your earnings to the earnings from the previous games and use the payment method you specified. You can expect a check from us within the next 7-10 days.

Have a nice day!

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