

Appendix B: Experimental Instructions

Welcome to the experiment

You are participating in a study about economic behavior. During the experiment, you and other participants will be asked to make decisions. You can earn money from the study. The amount you will earn depends on your decisions, the other participants' decisions, and some random factors. At the end of the experiment, your earnings will be paid to you privately in cash. During the experiment, all amounts will be stated in experimental currency units (ECUs) and will be converted into US dollars at the end (2 ECUs = 1 USD).

Please read the following instructions carefully. Should you have any question, please raise your hand. Please do not communicate with any other participant.

Continue

Multiple-round game and participants' roles


The experiment consists of 20 rounds. There are two roles: sellers and buyers. Each participant will be randomly assigned a role. Everyone's role will remain the same throughout the experiment. This means that, for example, if you are a seller in Round 1, then you will remain a seller in all remaining rounds, or if you are a buyer in Round 1, then you will remain a buyer in all remaining rounds.

There are 6 sellers and 6 buyers in today's experiment session.

Each seller and buyer will also be randomly assigned an ID number at the beginning of each round. Please note that this ID number will be reshuffled after each round. This means that if you are Seller 1 in Round 1, then you might be Seller 1, Seller 2, Seller 3, Seller 4, Seller 5 or Seller 6 in Round 2, and so on. If you are Buyer 1 in Round 1, then you might be Buyer 1, Buyer 2, Buyer 3, Buyer 4, Buyer 5 or Buyer 6 in Round 2, and so on.

At the end of the experiment, the computer randomly chooses your payoff from one round to determine your payment.

At the end of Round 20, you will be asked to answer several survey questions about the experiment. You will be paid 2 ECUs for answering those survey questions.



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Your role

You are a buyer.

Continue

SellersMayApply

Each round has 3 stages

In each round, sellers offer products to buyers at a certain **price** and with a certain level of **quality**. Buyers decide whether to purchase a product and, if so, from which seller to purchase a product. Each round consists of 3 stages. The following screens will explain what each seller and buyer need to do in each stage.

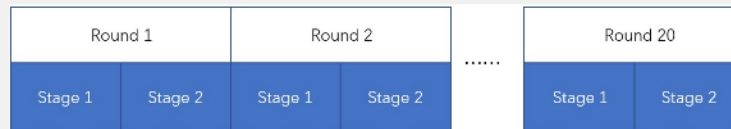
Round 1			Round 2			Round 20		
Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3		Stage 1	Stage 2	Stage 3

Continue

RandomTesting

Each round has 2 stages

In each round, sellers offer products to buyers at a certain **price** and with a certain level of **quality**. Buyers decide whether to purchase a product and, if so, from which seller to purchase a product. Each round consists of 2 stages. The following screens will explain what each seller and buyer need to do in each stage.



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SellersMayApply

Stage 1

Sellers make decisions

Sellers make decisions

Stage 2

Product quality testing

Algorithm Step 1

Algorithm Step 2

Algorithm Step 3

Algorithm Step 4

Stage 3

Buyers make decisions

Stage 1: Each seller sets quality and price of his/her product

In Stage 1 of each round, each seller individually determines the **quality** and **price** of his/her product.

The **quality** each seller can set for his/her product can be 1, 2 or 3. The larger the number is, the higher the **quality**.

Each seller can set a non-negative **price** for his/her product.

The number of products a seller sells is equal to how many buyers decide to purchase from this seller (which we will explain in Stage 3).

Each seller needs to pay a **cost per product sold**. The **cost per product sold** is only determined by the **quality**. The relationship between the **cost per product sold** and **quality** can be expressed as below (you can only see the following formula if you are a seller):

$$\text{Cost per product sold} = \text{Quality} \times \text{Quality}$$

In other words:

- If **Quality** = 1, then **Cost per product sold** = 1
- If **Quality** = 2, then **Cost per product sold** = 4
- If **Quality** = 3, then **Cost per product sold** = 9

Please note that the **quality** and **price** each seller sets in a certain round apply to every product he/she sells in this round. In other words, a seller cannot set different **qualities** and/or different **prices** for different products sold in the same round.

In Stage 1, buyers will see a blank waiting screen and cannot see any seller's **quality** or **price**.

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RandomTesting

Stage 1

Sellers make decisions

Product quality testing

Stage 2

Buyers make decisions

Stage 1: Each seller sets quality and price of his/her product

In Stage 1 of each round, each seller individually determines the **quality** and **price** of his/her product.

The **quality** each seller can set for his/her product can be 1, 2 or 3. The larger the number is, the higher the **quality**.

Each seller can set a non-negative **price** for his/her product.

The number of products a seller sells is equal to how many buyers decide to purchase from this seller (which we will explain in Stage 2).

Each seller needs to pay a **cost per product sold**. The **cost per product sold** is only determined by the **quality**. The relationship between the **cost per product sold** and **quality** can be expressed as below (you can only see the following formula if you are a seller):

Cost per product sold = Quality x Quality

In other words:

- If **Quality** = 1, then **Cost per product sold** = 1
- If **Quality** = 2, then **Cost per product sold** = 4
- If **Quality** = 3, then **Cost per product sold** = 9

Please note that the **quality** and **price** each seller sets in a certain round apply to every product he/she sells in this round. In other words, a seller cannot set different **qualities** and/or different **prices** for different products sold in the same round.

In Stage 1, buyers will see a blank waiting screen and cannot see any seller's **quality** or **price**.

Continue

RandomTesting

Stage 1

Sellers make decisions

Product quality testing

Stage 2

Buyers make decisions

Stage 1: The quality testing organization randomly reveals the qualities of 2 sellers' products

After all sellers have decided the **quality** and **price** of their products, a **quality testing organization** will randomly select 2 sellers' products, among all 6 sellers' products, to reveal the **qualities** of these 2 sellers' products to buyers in Stage 2. The **quality testing organization** is simulated by the computer in today's experiment.

The **qualities** of the other 4 sellers' products, which are not randomly selected by the **quality testing organization**, will be hidden from buyers in Stage 2.

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Stage 2: Each seller decides whether to apply for quality testing

After all sellers have decided the **qualities** and **prices** of their products, all sellers will move on to Stage 2.

In Stage 2, each seller can see the **quality** and **price** of all 6 sellers.

Each seller needs to decide whether to apply for quality testing conducted by a **quality testing organization**. In this experiment, this **quality testing organization** is simulated by the computer. After all sellers submit their decisions of whether to apply for quality testing, the **quality testing organization** will select at most 2 sellers' products to reveal their **qualities** to buyers in Stage 3.

The **qualities** of products of all sellers NOT revealed by the **quality testing organization** will be hidden to buyers in Stage 3.

In Stage 2, each seller needs to decide:
 - Whether to apply for quality testing.
 If he/she applies for quality testing, he/she is required to report the **quality** of his/her product to the **quality testing organization**. This **reported quality** can be true or false.

Each seller who chooses to apply for quality testing is required to pay an **application deposit** of 0.1 ECUs. Each seller whose product meets certain criteria, which we will explain later, will be returned the **application deposit** at the end of Stage 2.

All buyers will continue seeing a blank waiting screen and cannot see any seller's quality or price in Stage 2.

The next screen will explain how the **quality testing organization** selects and reveals the **true qualities** of at most 2 sellers' products.

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Stage 2: The quality testing organization reveals the qualities of at most 2 sellers' products

After all sellers decide whether to apply for quality testing and report the **qualities** of their products (if applying), the **quality testing organization** will use an algorithm to select at most 2 sellers' products to reveal their **qualities** to buyers in Stage 3. Below are the steps of this algorithm:

- **Algorithm Step 1:** Among all applying products, the **quality testing organization** selects products which meet ALL of the following 3 criteria into a **candidate pool**.
 - **Criterion 1:** Its **reported quality** should be 2 or 3.
 - **Criterion 2:** Its **price** should be the lowest among all applying products with the same **reported quality**.
 - **Criterion 3:** If its **reported quality** is 2, its **price** should be lower than the lowest **price** among all applying products with **reported quality** 3. If its **reported quality** is 3, then **Criterion 3** is always satisfied.
- If the **quality testing organization** returns the **application deposit** (0.1 ECUs) to all applying sellers whose products are selected into the **candidate pool**, if any. The **application deposits** will NOT be returned to applying sellers whose products are NOT selected into the **candidate pool**.
- **Algorithm Step 2:**
 - (Algorithm Step 2.1): If more than one product with reported quality 2 are in the candidate pool (these products should have the same price), randomly select one of them into the final testing pool. If there is only one product with reported quality 2 in the candidate pool, select it into the final testing pool. If there is no product with reported quality 2 in the candidate pool, then skip Algorithm Step 2.1.
 - (Algorithm Step 2.2): If more than one product with reported quality 3 are in the candidate pool (these products should have the same price), randomly select one of them into the final testing pool. If there is only one product with reported quality 3 in the candidate pool, select it into the final testing pool. If there is no product with reported quality 3 in the candidate pool, then skip Algorithm Step 2.2.
- **Algorithm Step 3:** The quality testing organization tests and finds out the true qualities of all products in the final testing pool (if any).
 - If a product's true quality is the same as its reported quality, the quality testing organization reveals to buyers the true quality of this product in Stage 3.
 - If a product's true quality is NOT the same as its reported quality, the quality testing organization will NOT reveal the true quality of this product to buyers in Stage 3 (the true quality of this product will remain hidden, just like any other products not selected into the final testing pool). This seller who is found out to report a false quality is required to pay a lying fee ($= 10 \times \text{Price} \times \text{Number of Products Sold}$).
- **Algorithm Step 4:** After Algorithm Step 3, if the product testing organization has already tested 2 products in total, or it does not find any product with a false reported quality in the current iteration, or all applying products have been tested, then finish the algorithm. Otherwise, return to Algorithm Step 1 to start a new iteration of the algorithm with the qualities of all tested products updated (but products) that have been tested in the first iteration will NOT be selected into the **candidate pool** in the new iteration). If there are 2 products selected into the final testing pool in the new iteration, then randomly test one product.

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SellersMayApply

Stage 2
 Product quality testing

Stage 3
 Buyers make decisions

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Buyers make decisions

Algorithm Step 1: Among all applying products, the **quality testing organization** selects products which meet ALL of the following 3 criteria into a **candidate pool**:

- Criterion 1:** Its **reported quality** should be 2 or 3.
- Criterion 2:** Its **price** should be the lowest among all applying products with the same **reported quality**.
- Criterion 3:** If its **reported quality** is 2, its **price** should be lower than the lowest **price** among all applying products with **reported quality** 3. If its **reported quality** is 3, then **Criterion 3** is always satisfied.

The **quality testing organization** returns the **application deposit** (0.1 ECUs) to all applying sellers whose products are selected into the **candidate pool**, if any. The **application deposits** will NOT be returned to applying sellers whose products are NOT selected into the **candidate pool**.

*According to the algorithm, Sellers B and D's products will be selected into the **candidate pool**.*

Seller D's product is selected because:

- its **reported quality** is 2. **Criterion 1** is satisfied.
- its **price** is the lowest among all applying products with **reported quality** 2. **Criterion 2** is satisfied.
- its **price** is lower than the lowest **price** among all applying products with **reported quality** 3 (Seller D's product). **Criterion 3** is satisfied.

Seller D's product is selected because:

- its **reported quality** is 3. **Criterion 1** is satisfied.
- its **price** is the lowest among all applying products with **reported quality** 3. **Criterion 2** is satisfied.
- Criterion 3** is also satisfied, because its **reported quality** is 3.

Seller A's product is NOT selected because its **reported quality** is 1. **Criterion 1** is NOT satisfied.

Seller C's product is NOT selected because:

- its **price** is NOT the lowest among all applying products with the same **reported quality** (Seller B's product, which has the same **reported quality** as Seller C's product, has a lower **price** than Seller C's product). **Criterion 2** is NOT satisfied.
- its **price** is NOT lower than the lowest **price** among all applying products with **reported quality** 3 (Seller D's product). **Criterion 3** is NOT satisfied either.

Seller E's product is NOT selected because its **price** is NOT the lowest among all applying products with the same **reported quality** (Seller D's product, which has the same **reported quality** as Seller E's product, has a lower **price** than Seller E's product). **Criterion 2** is NOT satisfied.

*Sellers B and D will be returned the **application deposit**, while Sellers A, C, E will not (Seller F did not apply for quality testing, so there is no **application deposit** to return).*

Seller ID	Price	Reported quality
A	p1	1
B	p2	2
C	p4	2
D	p3	3
F	p5	3

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 Product quality testing

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Buyers make decisions

Algorithm Step 1: Among all applying products, the **quality testing organization** selects products which meet ALL of the following 3 criteria into a **candidate pool**:

- Criterion 1:** Its **reported quality** should be 2 or 3.
- Criterion 2:** Its **price** should be the lowest among all applying products with the same **reported quality**.
- Criterion 3:** If its **reported quality** is 2, its **price** should be lower than the lowest **price** among all applying products with **reported quality** 3. If its **reported quality** is 3, then **Criterion 3** is always satisfied.

The **quality testing organization** returns the **application deposit** (0.1 ECUs) to all applying sellers whose products are selected into the **candidate pool**, if any. The **application deposits** will NOT be returned to applying sellers whose products are NOT selected into the **candidate pool**.

*According to the algorithm, Sellers B, C and D's products will be selected into the **candidate pool**.*

Sellers B and C's product are selected because:

- Their **reported quality** is 2. **Criterion 1** is satisfied.
- Their **price** is the lowest among all applying products with **reported quality** 2. **Criterion 2** is satisfied.
- Their **price** is lower than the lowest **price** among all applying products with **reported quality** 3 (Seller D's product). **Criterion 3** is satisfied.

Seller D's product is selected because:

- its **reported quality** is 3. **Criterion 1** is satisfied.
- its **price** is the lowest among all applying products with **reported quality** 3. **Criterion 2** is satisfied.
- Criterion 3** is also satisfied, because its **reported quality** is 3.

Seller A's product is NOT selected, because its **reported quality** is 1. **Criterion 1** is NOT satisfied.

Seller E's product is NOT selected because its **price** is NOT the lowest among all applying products with the same **reported quality** (Seller D's product, which has the same **reported quality** as Seller E's product, has a lower **price** than Seller E's product). **Criterion 2** is NOT satisfied.

*Sellers B, C and D will be returned the **application deposit**, while Sellers A and E will not (Seller F did not apply for quality testing, so there is no **application deposit** to return).*

Seller ID	Price	Reported quality
A	p1	1
B	p1	2
C	p1	2
D	p2	3
E	p3	3

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- Algorithm Step 1: Among all applying products, the quality testing organization selects products which meet ALL of the following 3 criteria into a **candidate pool**
 - Criterion 1: Its reported quality should be 2 or 3.
 - Criterion 2: Its price should be the lowest among all applying products with the same reported quality.
 - Criterion 3: If its reported quality is 2, its price should be lower than the lowest price among all applying products with reported quality 3. If its reported quality is 3, then Criterion 3 is always satisfied.

The quality testing organization returns the application deposit (0.1 tECUs) to all applying sellers whose products are selected into the **candidate pool**, if any. The application deposits will NOT be returned to applying sellers whose products are NOT selected into the **candidate pool**.

Example 3:
Suppose 4 sellers apply for quality testing (Sellers C and F decide not to apply). The reported qualities and prices of these 4 products are as follows:
Suppose $p1 < p2 < p3 < p4$.

Seller ID	Price	Reported quality
A	p3	1
B	p2	2
D	p1	3
E	p4	3

Price

Reported Quality

According to the algorithm, Seller D's product will be selected into the **candidate pool**.

Seller D's product is selected because:

- its reported quality is 3. Criterion 1 is satisfied
- its price is the lowest among all applying products with reported quality 3. Criterion 2 is satisfied
- Criterion 3 is also satisfied, because its reported quality is 3.

Seller A's product is NOT selected, because its reported quality is 1. Criterion 1 is NOT satisfied.

Seller B's product is NOT selected, because its price is NOT lower than the lowest price among all applying products with reported quality 3 (Seller D's product). Criterion 3 is NOT satisfied.

Seller E's product is NOT selected because its price is NOT the lowest among all applying products with the same reported quality (Seller D's product, which has the same reported quality as Seller E's product, has a lower price than Seller E's product). Criterion 2 is NOT satisfied.

Seller D will be returned the application deposit, while Sellers A, B or E will not (Sellers C and F did not apply for quality testing, so there is no application deposit to return).

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Stage 2: The quality testing organization reveals the quality of at most 2 sellers' products

After all sellers decide whether to apply for quality testing and report the qualities of their products (if applying), the quality testing organization will use an algorithm to select at most 2 sellers' products to reveal their qualities to buyers in Stage 3. Below are the steps of this algorithm.

- Algorithm Step 1: Among all applying products, the quality testing organization selects products which meet ALL of the following 3 criteria into a **candidate pool**
 - Criterion 1: Its reported quality should be 2 or 3.
 - Criterion 2: Its price should be the lowest among all applying products with the same reported quality.
 - Criterion 3: If its reported quality is 2, its price should be lower than the lowest price among all applying products with reported quality 3. If its reported quality is 3, then Criterion 3 is always satisfied.

The quality testing organization returns the application deposit (0.1 tECUs) to all applying sellers whose products are selected into the **candidate pool**, if any. The application deposits will NOT be returned to applying sellers whose products are NOT selected into the **candidate pool**.

- Algorithm Step 2
 - Algorithm Step 2.1: If more than one product with reported quality 2 are in the **candidate pool** (these products should have the same price), randomly select one of them into the **final testing pool**. If there is only one product with reported quality 2 in the **candidate pool**, select it into the **final testing pool**. If there is no product with reported quality 2 in the **candidate pool**, then skip Algorithm Step 2.1.
 - Algorithm Step 2.2: If more than one product with reported quality 3 are in the **candidate pool** (these products should have the same price), randomly select one of them into the **final testing pool**. If there is only one product with reported quality 3 in the **candidate pool**, select it into the **final testing pool**. If there is no product with reported quality 3 in the **candidate pool**, then skip Algorithm Step 2.2.
- Algorithm Step 3: The quality testing organization tests and finds out the true qualities of all products in the **final testing pool** (if any).
 - If a product's true quality is the same as its reported quality, the quality testing organization reveals to buyers the true quality of this product in Stage 3.
 - If a product's true quality is NOT the same as its reported quality, the quality testing organization will NOT reveal the true quality of this product to buyers in Stage 3 (the true quality of this product will remain hidden, just like any other product not selected into the **final testing pool**). This seller who is found out to report a false quality is required to pay a lying fee (= 10 × Price × Number of Products Sold).
- Algorithm Step 4: After Algorithm Step 3, if the product testing organization has already tested 2 products in total, or it does not find any product with a false reported quality in the current iteration, or all applying products have been tested, then finish the algorithm. Otherwise, return to Algorithm Step 1 to start a new iteration of the algorithm with the qualities of all tested products updated (but products) that have been tested in the first iteration will NOT be selected into the **candidate pool** in the new iteration). If there are 2 products selected into the **final testing pool** in the new iteration, then randomly test one product.

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• **Algorithm Step 2**

- (Algorithm Step 2.1): If more than one product with reported quality 2 are in the candidate pool (these products should have the same price), randomly select one of them into the final testing pool. If there is only one product with reported quality 2 in the candidate pool, select it into the final testing pool. If there is no product with reported quality 2 in the candidate pool, then skip Algorithm Step 2.1.
- (Algorithm Step 2.2): If more than one product with reported quality 3 are in the candidate pool (these products should have the same price), randomly select one of them into the final testing pool. If there is only one product with reported quality 3 in the candidate pool, select it into the final testing pool. If there is no product with reported quality 3 in the candidate pool, then skip Algorithm Step 2.2.

Example 2 (continued):
 Recall from the previous Example 2 that Sellers B, C and D's products have been selected into the candidate pool.
 (recall that $p1 < p2$.)

Seller ID	Price	Reported quality
B	$p1$	2
C	$p1$	2
D	$p2$	3

Price

Reported Quality

There are more than one product with reported quality 2 in the candidate pool (Sellers B and C). Therefore, each of Seller B and Seller C's products will have a 50% chance to be selected into the final testing pool.

There is only one product with reported quality 3 in the candidate pool (Seller D). Therefore, Seller D's product must be selected into the final testing pool.

In other words, there is a 50% chance that the final testing pool consists of Sellers B and D's products, and there is a 50% chance that the final testing pool consists of Sellers C and D's products.

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Stage 2: The quality testing organization reveals the quality of at most 2 sellers' products

After all sellers decide whether to apply for quality testing and report the qualities of their products (if applying), the quality testing organization will use an algorithm to select at most 2 sellers' products to reveal their qualities to buyers in Stage 3. Below are the steps of this algorithm.

• **Algorithm Step 1** Among all applying products, the quality testing organization selects products which meet ALL of the following 3 criteria into a candidate pool.

- (Criterion 1): its reported quality should be 2 or 3.
- (Criterion 2): its price should be the lowest among all applying products with the same reported quality.
- (Criterion 3): if its reported quality is 2, its price should be lower than the lowest price among all applying products with reported quality 3. If its reported quality is 3, then Criterion 3 is always satisfied.

The quality testing organization returns the application deposit (0.1 CGLb) to all applying sellers whose products are selected into the candidate pool. If any, the application deposits will NOT be returned to applying sellers whose products are NOT selected into the candidate pool.

• **Algorithm Step 2**

- (Algorithm Step 2.1): If more than one product with reported quality 2 are in the candidate pool (these products should have the same price), randomly select one of them into the final testing pool. If there is only one product with reported quality 2 in the candidate pool, select it into the final testing pool. If there is no product with reported quality 2 in the candidate pool, then skip Algorithm Step 2.1.
- (Algorithm Step 2.2): If more than one product with reported quality 3 are in the candidate pool (these products should have the same price), randomly select one of them into the final testing pool. If there is only one product with reported quality 3 in the candidate pool, select it into the final testing pool. If there is no product with reported quality 3 in the candidate pool, then skip Algorithm Step 2.2.

• **Algorithm Step 3** The quality testing organization tests and finds out the true qualities of all products in the final testing pool (if any).

- If a product's true quality is the same as its reported quality, the quality testing organization reveals to buyers the true quality of this product in Stage 3.
- If a product's true quality is NOT the same as its reported quality, the quality testing organization will NOT reveal the true quality of this product to buyers in Stage 3 (the true quality of this product will remain hidden, just like any other product not selected into the final testing pool). This seller who is found out to report a false quality is required to pay a lying fee ($= 10 \times \text{Price} \times \text{Number of Products Sold}$).

• **Algorithm Step 4** After Algorithm Step 3, if the product testing organization has already tested 2 products in total or it does not find any product with a false reported quality in the current iteration, or all applying products have been tested, then finish the algorithm. Otherwise, return to Algorithm Step 1 to start a new iteration of the algorithm with the qualities of all tested products updated (but product(s) that have been tested in the first iteration will NOT be selected into the candidate pool in the new iteration). If there are 2 products selected into the final testing pool in the new iteration, then randomly test one product.

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- **Algorithm Step 3:** The quality testing organization tests and finds out the **true qualities** of all products in the **final testing pool** (if any)
 - If a product's **true quality** is the same as its **reported quality**, the **quality testing organization** reveals to buyers the **true quality** of this product in Stage 3.
 - If a product's **true quality** is NOT the same as its **reported quality**, the **quality testing organization** will NOT reveal the **true quality** of this product to buyers in Stage 3 (the **true quality** of this product will remain hidden, just like any other product not selected into the **final testing pool**). This seller who is found out to report a **false quality** is required to pay a **lying fee** ($= 10 \times \text{Price} \times \text{Number of Products Sold}$).

Example 2 (continued):
 Suppose that Sellers B and D's products have been selected into the **final testing pool**. The **quality testing organization** will then test and find out the **true qualities** of Sellers B and D's products.

Suppose the **true quality** of Seller B's product is 2, which is the same as its **reported quality**.
 Suppose the **true quality** of Seller D's product is 3, which is **DIFFERENT** from its **reported quality** (3).

Seller ID	True quality	Price	Reported quality
B	2	p1	2
D	2	p2	3

In this case, the **true quality** of Seller B's product will be revealed to buyers in Stage 3.

The **true quality** of Seller D's product will be hidden in Stage 3. Seller D also needs to pay a **lying fee** for reporting a **false quality**. The **lying fee** Seller D pays = $10 \text{ ECUs} \times p2 \times \text{Number of products Seller D sells}$.

The **true quality** of other sellers' products (Sellers A, C, E and F) will also be hidden in Stage 3.

Please note that the **quality testing organization** will only reveal **true qualities** but never **reported qualities** of products to buyers in Stage 3.

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Stage 2: The quality testing organization reveals the quality of at most 2 sellers' products

After all sellers decide whether to apply for quality testing and report the **qualities** of their products (if applying), the **quality testing organization** will use an algorithm to select at most 2 sellers' products to reveal their **qualities** to buyers in Stage 3. Below are the steps of this algorithm:

- **Algorithm Step 1:** Among all applying products, the **quality testing organization** selects products which meet **At least 1** of the following 3 criteria into a **candidate pool**:
 - **Criterion 1:** Its **reported quality** should be 2 or 3.
 - **Criterion 2:** Its **price** should be the lowest among all applying products with the same **reported quality**.
 - **Criterion 3:** If its **reported quality** is 2, its **price** should be lower than the lowest price among all applying products with **reported quality** 3. If its **reported quality** is 3, then **Criterion 3** is always satisfied.

The **quality testing organization** returns the application deposit (0.1 ECUs) to all applying sellers whose products are selected into the **candidate pool**, if any. The application deposits will NOT be returned to applying sellers whose products are NOT selected into the **candidate pool**.
- **Algorithm Step 2:**
 - (Algorithm Step 2.1): If more than one product with **reported quality** 2 are in the **candidate pool** (these products should have the same price), randomly select one of them into the **final testing pool**. If there is only one product with **reported quality** 2 in the **candidate pool**, select it into the **final testing pool**. If there is no product with **reported quality** 2 in the **candidate pool**, then skip Algorithm Step 2.1.
 - (Algorithm Step 2.2): If more than one product with **reported quality** 3 are in the **candidate pool** (these products should have the same price), randomly select one of them into the **final testing pool**. If there is only one product with **reported quality** 3 in the **candidate pool**, select it into the **final testing pool**. If there is no product with **reported quality** 3 in the **candidate pool**, then skip Algorithm Step 2.2.
- **Algorithm Step 3:** The **quality testing organization** tests and finds out the **true qualities** of all products in the **final testing pool** (if any)
 - If a product's **true quality** is the same as its **reported quality**, the **quality testing organization** reveals to buyers the **true quality** of this product in Stage 3.
 - If a product's **true quality** is NOT the same as its **reported quality**, the **quality testing organization** will NOT reveal the **true quality** of this product to buyers in Stage 3 (the **true quality** of this product will remain hidden, just like any other product not selected into the **final testing pool**). This seller who is found out to report a **false quality** is required to pay a **lying fee** ($= 10 \times \text{Price} \times \text{Number of Products Sold}$).
- **Algorithm Step 4:** After Algorithm Step 3, if the **product testing organization** has already tested 2 products in total, or it does not find any product with a **false reported quality** in the current iteration, or all applying products have been tested, then finish the algorithm. Otherwise, return to **Algorithm Step 1** to start a new iteration of the algorithm with the **qualities** of all tested products updated (but product(s) that have been tested in the first iteration will NOT be selected into the **candidate pool** in the new iteration). If there are 2 products selected into the **final testing pool** in the new iteration, then randomly test one product.

[Continue](#)

SellersMayApply

Seller's payoff

In each round, each seller's payoff from this round is calculated as below:

$$\text{Seller's payoff} = (\text{Price} - \text{Cost per product sold}) \times \text{Number of products sold} - \text{Application deposit paid (if relevant)} + \text{Application deposit returned (if relevant)} - \text{Lying fee paid (if relevant)}$$

Continue

RandomTesting

Seller's payoff

In each round, each seller's payoff from this round is calculated as below:

$$\text{Seller's payoff} = (\text{Price} - \text{Cost per product sold}) \times \text{Number of products sold}$$

Continue

SellersMayApply	Stage 1	Stage 2				Stage 3
	Sellers make decisions	Product quality testing				
		Algorithm Step 1	Algorithm Step 2	Algorithm Step 3	Algorithm Step 4	

Stage 3: Buyers purchase a product from a seller

In Stage 3, each buyer can see the **prices** of all 6 sellers and the **true qualities** of at most two sellers revealed by the **quality testing organization**.

Each buyer decides **whether** to purchase a product from a seller. If so, each buyer decides from which seller to purchase at most one product.

Each buyer's payoff in a round is determined by three factors: (1) the **true quality** of the product he/she purchases; (2) the **price** of the product; (3) the buyer's **individual valuation of quality**.

Different buyers value the quality of a product differently. Among all 6 buyers, there are two types of buyers. The table below summarizes each buyer's **individual valuation of quality**.

Buyer ID	Individual valuation of quality
Buyer 1	4
Buyer 2	4
Buyer 3	4
Buyer 4	8
Buyer 5	8
Buyer 6	8

For example, if you are Buyer 1 in a round, then your **individual valuation of quality** in this round will be 4. If you are Buyer 4 in a round, then your **individual valuation of quality** will be 8 in this round.

Recall that each buyer's ID will be reshuffled in a new round. This means that your **individual valuation of quality** might also be reshuffled in a new round.

Continue

RandomTesting	Stage 1	Stage 2
	Product quality testing	

Stage 2: Buyers purchase a product from a seller

In Stage 2, each buyer can see the **prices** of all 6 sellers and the **qualities** of two sellers revealed by the **quality testing organization**.

Each buyer decides **whether** to purchase a product from a seller. If so, each buyer decides from which seller to purchase at most one product.

Each buyer's payoff in a round is determined by three factors: (1) the **quality** of the product he/she purchases; (2) the **price** of the product; (3) the buyer's **individual valuation of quality**.

Different buyers value the quality of a product differently. Among all 6 buyers, there are two types of buyers. The table below summarizes each buyer's **individual valuation of quality**.

Buyer ID	Individual valuation of quality
Buyer 1	4
Buyer 2	4
Buyer 3	4
Buyer 4	8
Buyer 5	8
Buyer 6	8

For example, if you are Buyer 1 in a round, then your **individual valuation of quality** in this round will be 4. If you are Buyer 4 in a round, then your **individual valuation of quality** will be 8 in this round.

Recall that each buyer's ID will be reshuffled in a new round. This means that your **individual valuation of quality** might also be reshuffled in a new round.

Continue

Buyer's payoff

In each round, if a buyer purchases a product, then his/her payoff in this round is calculated as below.

Buyer's payoff =
 $\text{Individual valuation of quality} \times \text{True quality of the product} - \text{Price of the product}$

If a buyer chooses not to purchase any product, then his/her payoff in this round is

Buyer's payoff = 0

Continue

What buyers know about the cost per product sold

Recall that each seller needs to pay a cost for each product sold (which is called **cost per product sold**).

The formula of **cost per product sold** is not visible to buyers. However, the following information about the **cost per product sold** is provided to buyers:

- **Cost per product sold** is only determined by **quality**. The higher the **quality**, the higher the **cost per product sold**.
- Suppose that products with **qualities** 1, 2 and 3 all have a **price** equal to the corresponding **cost per product sold** (in other words, a product with **quality** 1 has a **price** equal to the **cost per product sold** of a **quality** 1 product, a product with **quality** 2 has a **price** equal to the **cost per product sold** of a **quality** 2 product, and a product with **quality** 3 has a **price** equal to the **cost per product sold** of a **quality** 3 product). Then
 - If you are a buyer whose **individual valuation of quality** is 1, then among all these three types of products, you get the highest payoff if you buy a product from a seller who offers a **quality** 2 product at a **price** equal to the **cost per product sold** of a **quality** 2 product. This payoff is strictly greater than 0.
 - If you are a buyer whose **individual valuation of quality** is 8, then among all these three types of products, you get the highest payoff if you buy a product from a seller who offers a **quality** 3 product at a **price** equal to the **cost per product sold** of a **quality** 3 product. This payoff is strictly greater than 0.

Continue

Feedback at the end of each round

After all buyers make decisions in Stage 3, the computer will calculate each seller's and buyer's payoff in the current round. Each seller and buyer will receive feedback about his/her payoff in the current round.

Continue

Summary of Instructions 1/3 Basic Info

- You are randomly assigned a role of seller or buyer, and your role remains the same throughout all rounds. Your seller/buyer ID is also randomly assigned in each round and is reshuffled after each round.
- The experiment consists of 20 rounds. In each round, sellers sell products, and buyers buy products from the sellers or do not buy any product.

Continue

SellersMayApply

Summary of Instructions 2/3 Procedures

	Stage 1	Stage 2	Stage 3
Sellers	Each seller decides the quality and price of his/her product.	<ul style="list-style-type: none"> Each seller sees the qualities and prices of all 6 sellers' products. Each seller decides whether to apply for quality testing. <ul style="list-style-type: none"> If a seller applies for quality testing, he/she pays an application deposit of 0.1 ECUs (this application deposit will be returned to the seller if his/her product is selected into the candidate pool). If a seller applies for quality testing, he/she needs to report the quality of his/her products to the quality testing organization (a seller can report a false quality, but the seller needs to pay a lying fee ($= 10 \times \text{Price} \times \text{Number of Products Sold}$) if his/her product with a false reported quality is tested, and the true quality of this product will not be revealed to buyers in Stage 3). 	Waiting for buyers to make decisions.
Buyers	Waiting for sellers to make decisions.	Waiting for sellers to make decisions.	<ul style="list-style-type: none"> Each buyer sees the price of each seller. Each buyer sees the true qualities of at most 2 sellers' products revealed by the quality testing organization. The true qualities of other products are hidden. Each buyer decides from which seller to purchase one product. Each buyer can also decide not to purchase any product.
Quality Testing Organization (Simulated by the computer)		<p>After all sellers decide whether to apply for quality testing and report the quality of their products (if applying), the quality testing organization will use an algorithm to select at most 2 sellers' products to reveal their true qualities to buyers in Stage 3. The algorithm consists of 3 steps:</p> <ul style="list-style-type: none"> Algorithm Step 1: Among all applying products, the quality testing organization selects products which meet ALL of the following 3 criteria into a candidate pool: <ul style="list-style-type: none"> (Criterion 1): Its reported quality should be 2 or 3. (Criterion 2): Its price should be the lowest among all applying products with the same reported quality. (Criterion 3): If its reported quality is 2, its price should be lower than the lowest price among all applying products with reported quality 3. If its reported quality is 3, then Criterion 3 is always satisfied. <p>The quality testing organization returns the application deposit (0.1 ECUs) to all applying sellers whose products are selected into the candidate pool, if any. The application deposits will NOT be returned to applying sellers whose products are NOT selected into the candidate pool.</p> Algorithm Step 2: <ul style="list-style-type: none"> (Algorithm Step 2.1): If more than one product with reported quality 2 are in the candidate pool (these products should have the same price), randomly select one of them into the final testing pool. If there is only one product with reported quality 2 in the candidate pool, select it into the final testing pool. If there is no product with reported quality 2 in the candidate pool, then skip Algorithm Step 2.1. (Algorithm Step 2.2): If more than one product with reported quality 3 are in the candidate pool (these products should have the same price), randomly select one of them into the final testing pool. If there is only one product with reported quality 3 in the candidate pool, select it into the final testing pool. If there is no product with reported quality 3 in the candidate pool, then skip Algorithm Step 2.2. Algorithm Step 3: The quality testing organization tests and finds out the true qualities of all products in the final testing pool (if any). <ul style="list-style-type: none"> If a product's true quality is the same as its reported quality, the quality testing organization reveals to buyers the true quality of this product in Stage 3. If a product's true quality is NOT the same as its reported quality, the quality testing organization will NOT reveal the true quality of this product to buyers in Stage 3 (the true quality of this product will remain hidden, just like any other product not selected into the final testing pool). This seller who is found out to report a false quality is required to pay a lying fee ($= 10 \times \text{Price} \times \text{Number of Products Sold}$). Algorithm Step 4: After Algorithm Step 3, if the product testing organization has already tested 2 products in total, or it does not find any product with a false reported quality in the current iteration, or all applying products have been tested, then finish the algorithm. Otherwise, return to Algorithm Step 1 to start a new iteration of the algorithm with the qualities of all tested products updated (but product(s) that have been tested in the first iteration will NOT be selected into the candidate pool in the new iteration). If there are 2 products selected into the final testing pool in the new iteration, then randomly test one product. 	

Continue

RandomTesting

Summary of Instructions 2/3 Procedures

	Stage 1	Stage 2
Sellers	Each seller decides the quality and price of his/her product.	Waiting for buyers to make decisions.
Buyers	Waiting for sellers to make decisions.	<ul style="list-style-type: none"> Each buyer sees the price of each seller. Each buyer sees the qualities of the 2 sellers' products revealed by the quality testing organization. The qualities of other products are hidden. Each buyer decides from which seller to purchase one product. Each buyer can also decide not to purchase any product.
Quality Testing Organization (Simulated by the computer)	<p>After all sellers decide the qualities and prices of their products, the quality testing organization will randomly select 2 sellers' products to reveal their qualities to buyers in Stage 2.</p> <p>The qualities of all the other 4 sellers' products that are NOT randomly selected will be hidden from buyers in Stage 2.</p>	

Continue

Summary of Instructions 3/3 Payoffs

- Each participant's payoff in a round:
 - **Each seller's payoff =**
 $(\text{Price} - \text{Cost per product sold}) \times \text{Number of products sold} - \text{Application deposit paid (if relevant)} + \text{Application deposit returned (if relevant)} - \text{Lying fee paid (if relevant)}$
 - $\text{Cost per product sold} = \text{Quality} \times \text{Quality}$ (Only visible to sellers)
 - **Each buyer's payoff:**
 - if he/she purchases a product, then **his/her payoff = Individual valuation of quality \times True quality of the product - Price of the product.**
 - if he/she chooses not to purchase a product, then **his/her payoff = 0.**
- What buyers know about sellers' **cost per product sold**
 - **Cost per product sold** is only determined by **quality**. The higher the **quality**, the higher the **cost per product sold**. (In other words, a product with **quality 1** has a price equal to the **cost per product sold** of a **quality 1** product, a product with **quality 2** has a price equal to the **cost per product sold** of a **quality 2** product, and a product with **quality 3** has a price equal to the **cost per product sold** of a **quality 3** product), then:
 - If you are a buyer whose **Individual valuation of quality** is 4, then among all these three types of products, you get the highest payoff if you buy a product from a seller who offers a **quality 2** product at a price equal to the **cost per product sold** of a **quality 2** product. This payoff is strictly greater than 0.
 - If you are a buyer whose **Individual valuation of quality** is 8, then among all these three types of products, you get the highest payoff if you buy a product from a seller who offers a **quality 3** product at a price equal to the **cost per product sold** of a **quality 3** product. This payoff is strictly greater than 0.

Continue

Comprehension Questions - Introduction

To ensure that you have fully understood the instructions of this experiment, you will be asked to answer several comprehension questions. You have unlimited number of attempts to correctly answer each question, but you must correctly answer all of them in order to proceed to the experiment. In addition, you will receive 22 ECUs for correctly answering all questions.

Continue

Comprehension Question 1

Summary of Instructions

Review Test

Procedures

Page 6/6

Recall that all sellers determine the quality and price of their products in Stage 1. At the beginning of Stage 2, what information can each seller see when deciding whether to apply for quality testing?

- ☐ Only the quality and price of the seller's own product.
- ☐ The qualities and prices of all sellers' products.
- ☐ No information.

You can click the "Procedures" button on the top-right corner to check the summary of instructions to help you answer this question.

Submit

Comprehension Question 1

Summary of Instructions

Review Test

Procedures

Page 6/6

Which of the following statements is true about product quality testing at the end of Stage 1?

- ☐ The quality-testing organization will reveal the qualities of all 6 sellers to buyers in Stage 2.
- ☐ The quality-testing organization will randomly select 2 sellers' products to reveal their qualities to buyers in Stage 2.

You can click the "Procedures" button on the top-right corner to check the summary of instructions to help you answer this question.

Submit

Comprehension Question 2: Enter five numbers

Your answer to the previous question is correct. Now let's continue to answer the following question.
Before you answer Question 2, please randomly enter 5 different numbers between 1 and 24 (1 and 24 included) below.

Submit

SellersMayApply

Comprehension Question 2: Introduction

Suppose in a certain round, at the end of Stage 2, six sellers make the following decisions on qualities, prices and whether to apply for quality testing.
According to the quality testing algorithm, which seller(s)' true qualities will be revealed to buyers in Stage 3?

Seller ID	True quality	Price	Apply for quality testing?	Reported quality
Seller A	2	1.00	Apply	2
Seller B	1	2.00	Apply	1
Seller C	2	3.00	Apply	2
Seller D	3	4.00	Not Apply	
Seller E	2	5.00	Apply	3
Seller F	3	6.00	Apply	3

To make it easier for you to solve this question, let's decompose this question into several steps.
If you are ready to move on, please click "Continue".

Continue

SellersMayApply

Comprehension Question 2.1

Suppose in a certain round, at the end of Stage 2, six sellers make the following decisions on qualities, prices and whether to apply for quality testing. According to the quality testing algorithm, which seller(s)' true qualities will be revealed to buyers in Stage 3?

	True quality	Price	Apply for quality testing?	Reported quality
Seller A	2	1.00	/Apply	2
Seller B	1	2.00	Apply	1
Seller C	2	3.00	Apply	2
Seller D	3	4.00	Not Apply	
Seller E	2	5.00	Apply	3
Seller F	3	5.00	Apply	3

Question 2.1: According to Algorithm Step 1, which product(s) will be selected into the **candidate pool**?

Recall that a seller's product will be selected into the **candidate pool** if his/her product satisfies all 3 criteria. To help you answer this question, please check whether each seller's product satisfies each of the 3 criteria (if you think a certain criterion is satisfied, please check the box in the corresponding cell). If a product satisfies all 3 criteria, then it should be selected into the **candidate pool**.

You can use the summary of quality testing algorithm below to help you answer this question

Seller ID	True quality	Price	Apply for quality testing?	Reported quality	Criterion 1 satisfied?	Criterion 2 satisfied?	Criterion 3 satisfied?	Selected into candidate pool?
Seller A	2	1.00	Apply	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seller B	1	2.00	Apply	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seller C	2	3.00	Apply	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seller D	3	4.00	Not Apply		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seller E	2	5.00	Apply	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seller F	3	5.00	Apply	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Algorithm Step 1:** Among all applying products, the **quality testing organization** selects products which meet ALL of the following 3 criteria into a **candidate pool**:
 - (Criterion 1):** Its **reported quality** should be 2 or 3.
 - (Criterion 2):** Its **price** should be the lowest among all applying products with the same **reported quality**.
 - (Criterion 3):** If its **reported quality** is 2, its **price** should be lower than the lowest **price** among all applying products with **reported quality** 3. If its **reported quality** is 3, then **Criterion 3** is always satisfied.

The **quality testing organization** returns the **application deposit** (0.1 ECUs) to all applying sellers whose products are selected into the **candidate pool**, if any. The **application deposits** will NOT be returned to applying sellers whose products are NOT selected into the **candidate pool**.

Submit

SellersMayApply

Comprehension Question 2.2

Suppose in a certain round, at the end of Stage 2, six sellers make the following decisions on qualities, prices and whether to apply for quality testing. According to the quality testing algorithm, which seller(s)' true qualities will be revealed to buyers in Stage 3?

	True quality	Price	Apply for quality testing?	Reported quality
Seller A	2	1.00	/Apply	2
Seller B	1	2.00	Apply	1
Seller C	2	3.00	Apply	2
Seller D	3	4.00	Not Apply	
Seller E	2	5.00	Apply	3
Seller F	3	5.00	Apply	3

Your answer to the previous question is correct. Now let's continue to answer the following question.

Question 2.2: From Question 2.1, we know that Sellers A, E and F's products will be selected into the **candidate pool**. For each seller, please decide whether he/she will be turned the **application deposit**.

Hint: **Application deposit** will be returned to an **applying seller** if his/her product is selected into the **candidate pool**.

You can use the summary of quality testing algorithm below to help you answer this question

Seller ID	True quality	Price	Apply for quality testing?	Reported quality	Selected into candidate pool?	Seller is returned the application deposit?
Seller A	2	1.00	Apply	2	Yes	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Seller B	1	2.00	Apply	1	No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Seller C	2	3.00	Apply	2	No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Seller D	3	4.00	Not Apply			
Seller E	2	5.00	Apply	3	Yes	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Seller F	3	5.00	Apply	3	Yes	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

- Algorithm Step 1:** Among all applying products, the **quality testing organization** selects products which meet ALL of the following 3 criteria into a **candidate pool**:
 - (Criterion 1):** Its **reported quality** should be 2 or 3.
 - (Criterion 2):** Its **price** should be the lowest among all applying products with the same **reported quality**.
 - (Criterion 3):** If its **reported quality** is 2, its **price** should be lower than the lowest **price** among all applying products with **reported quality** 3. If its **reported quality** is 3, then **Criterion 3** is always satisfied.

The **quality testing organization** returns the **application deposit** (0.1 ECUs) to all applying sellers whose products are selected into the **candidate pool**, if any. The **application deposits** will NOT be returned to applying sellers whose products are NOT selected into the **candidate pool**.

Submit

SellersMayApply

Comprehension Question 2.3

Suppose in a certain round, at the end of Stage 2, six sellers make the following decisions on qualities, prices and whether to apply for quality testing. According to the quality testing algorithm, which seller(s)' true qualities will be revealed to buyers in Stage 3?

	True quality	Price	Apply for quality testing?	Reported quality
Seller A	2	1.00	Apply	2
Seller B	1	2.00	Apply	1
Seller C	2	3.00	Apply	2
Seller D	3	4.00	Not Apply	
Seller E	2	5.00	Apply	3
Seller F	3	6.00	Apply	3

You can use the summary of quality testing algorithm below to help you answer this question.

Your answer to the previous question is correct. Now let's continue to answer the following question.

Question 2.3: After Algorithm Step 1, Sellers A, E and F's products are selected into the **candidate pool**.

According to Algorithm Step 2, which seller(s)' product(s) will be selected into the **final testing pool**?

- ☐ Seller A and E's products
- ☐ Seller A and F's products
- ☐ Seller E and F's products
- ☐ Seller A's product must be selected. Each of Seller E and F's products has a 50% chance to be selected.
- ☐ Seller F's product must be selected. Each of Seller A and E's products has a 50% chance to be selected.
- ☐ None of the sellers

• **Algorithm Step 2:**

- **(Algorithm Step 2.1):** If more than one product with **reported quality 2** are in the **candidate pool** (these products should have the same **price**), randomly select one of them into the **final testing pool**. If there is only one product with **reported quality 2** in the **candidate pool**, select it into the **final testing pool**. If there is no product with **reported quality 2** in the **candidate pool**, then skip **Algorithm Step 2.1**.
- **(Algorithm Step 2.2):** If more than one product with **reported quality 3** are in the **candidate pool** (these products should have the same **price**), randomly select one of them into the **final testing pool**. If there is only one product with **reported quality 3** in the **candidate pool**, select it into the **final testing pool**. If there is no product with **reported quality 3** in the **candidate pool**, then skip **Algorithm Step 2.2**.

Submit

SellersMayApply

Comprehension Question 2.4

Suppose in a certain round, at the end of Stage 2, six sellers make the following decisions on qualities, prices and whether to apply for quality testing. According to the quality testing algorithm, which seller(s)' true qualities will be revealed to buyers in Stage 3?

	True quality	Price	Apply for quality testing?	Reported quality
Seller A	2	2.00	Apply	2
Seller B	1	3.00	Apply	1
Seller C	2	4.00	Apply	2
Seller D	3	5.00	Not Apply	
Seller E	2	6.00	Apply	3
Seller F	3	6.00	Apply	3

You can use the summary of quality testing algorithm below to help you answer this question.

Your answer to the previous question is correct. Now let's continue to answer the following question.

Suppose after Algorithm Step 2, Seller A's product is selected into the **final testing pool** and Seller F's product is randomly selected into the **final testing pool**.

Question 2.4a: Which seller(s)' true qualities will be revealed to buyers in Stage 3?

Hint: You need to compare the **true quality** with the **reported quality** of Sellers A and F's products.

- ☐ Seller A's product only.
- ☐ Seller F's product only.
- ☐ Both Seller A and Seller F's products.
- ☐ Neither Seller A's product nor Seller F's product.

Question 2.4b: Is there any seller(s) who need(s) to pay a lying fee for reporting a false quality? If so, which seller(s) need to pay?

- ☐ Seller A only.
- ☐ Seller F only.
- ☐ Both Seller A and Seller F.
- ☐ Neither Seller A nor Seller F.

• **Algorithm Step 3:** The quality testing organization tests and finds out the **true qualities** of all products in the **final testing pool** (if any).

- If a product's **true quality** is the same as its **reported quality**, the **quality testing organization** reveals to buyers the **true quality** of this product in Stage 3.
- If a product's **true quality** is NOT the same as its **reported quality**, the **quality testing organization** will NOT reveal the **true quality** of this product to buyers in Stage 3 (the **true quality** of this product will remain hidden, just like any other product not selected into the **final testing pool**). This seller who is found out to report a false **quality** is required to pay a **lying fee** ($= 10 + \text{Price} \times \text{Number of Products Sold}$).

Submit

Comprehension Question 2.5

Suppose in a certain round, at the end of Stage 2, six sellers make the following decisions on qualities, prices and whether to apply for quality testing. According to the quality testing algorithm, which seller(s)' true qualities will be revealed to buyers in Stage 3?

	True quality	Price	Apply for quality testing?	Reported quality
Seller A	2	2.00	Apply	2
Seller B	1	3.00	Apply	1
Seller C	2	4.00	Apply	2
Seller D	3	5.00	Not Apply	
Seller E	2	6.00	Apply	3
Seller F	3	6.00	Apply	3

Your answer to the previous question is correct. Now let's continue to answer the following question.

You can use the summary of quality testing algorithm below to help you answer this question.

Suppose after **Algorithm Step 2**, Seller A's product is selected into the **final testing pool** and Seller E's product is randomly selected into the **final testing pool**.

Question 2.5a: Which seller(s)' true qualities will be revealed to buyers in Stage 3?

Hint: You need to compare the **true quality** with the **reported quality** of Sellers A and E's products.

- ☐ Seller A's product only.
☐ Seller E's product only.
☐ Both Seller A and Seller E's products.
☐ Neither Seller A's product nor Seller E's product.

• **Algorithm Step 3:** The quality testing organization tests and finds out the **true qualities** of all products in the **final testing pool** (if any).

- If a product's **true quality** is the same as its **reported quality**, the **quality testing organization** reveals to buyers the **true quality** of this product in Stage 3.
- If a product's **true quality** is NOT the same as its **reported quality**, the **quality testing organization** will NOT reveal the **true quality** of this product to buyers in Stage 3 (the **true quality** of this product will remain hidden, just like any other product not selected into the **final testing pool**). This seller who is found out to report a false **quality** is required to pay a **lying fee** ($= 10 + \text{Price} \times \text{Number of Products Sold}$).

Question 2.5b: Is there any seller(s) who need(s) to pay a lying fee for reporting a false quality? If so, which seller(s) need to pay?

- ☐ Seller A only.
☐ Seller E only.
☐ Both Seller A and Seller E.
☐ Neither Seller A nor Seller E.

Submit

Comprehension Question 3

Summary of Instructions

Basic Test
 Procedures
 Penalties

Your answer to the previous question is correct. Now let's continue to answer the following question.

In Stage 3, when buyers are deciding whether and from which seller to purchase a product, what information can each buyer see?

- ☐ Only the prices of all sellers' products.
☐ The prices and qualities of all sellers' products.
☐ The prices of all sellers' products and the qualities of products that are revealed by the quality testing organization.

You can click the "Procedures" button on the top-right corner to check the summary of instructions to help you answer this question.

Submit

SellersMayApply

Comprehension Question 4

Your answer to the previous question is correct. Now let's continue to answer the following question.

Let's continue looking at the previous example.

	True quality	Price	Apply for quality testing?	Reported quality	Cost per product sold
Seller A	2	2.00	Apply	2	4
Seller B	1	4.00	Apply	1	1
Seller C	2	6.00	Apply	2	4
Seller D	3	8.00	Not Apply		9
Seller E	2	10.00	Apply	3	4
Seller F	3	10.00	Apply	3	9

Suppose that you were Seller E.

Suppose you estimated that your (Seller E's) product will be **purchased by 2 buyers** (in other words, you estimated that the number of products sold is 2). Please use the calculator on the right to calculate your (Seller E's) payoff in this round according to this estimation.

Notes:

1. To use the calculator, please enter the number of buyers who will purchase your (Seller E's) product according to your estimation, and then select each seller's quality (using application decision and his/her reported quality (if applicable) according to the summary table on the left, and then click the "Calculate" button.
2. This calculator will also be available to you later in each round of the experiment.

Please enter your (Seller E's) payoff according to this estimation, if you (Seller E) pay the lying fee:

Please enter your (Seller E's) payoff according to this estimation, if you (Seller E) do NOT pay the lying fee:

Seller payoff calculator

Number of buyers who purchase your product:

Seller ID	True Quality	Price	Apply for quality testing?	Reported quality
Seller A	2	2.00	<input type="radio"/> Apply <input type="radio"/> Not Apply	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3
Seller B	1	4.00	<input type="radio"/> Apply <input type="radio"/> Not Apply	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3
Seller C	2	6.00	<input type="radio"/> Apply <input type="radio"/> Not Apply	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3
Seller D	3	8.00	<input type="radio"/> Apply <input type="radio"/> Not Apply	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3
Seller E (You)	2	10.00	<input type="radio"/> Apply <input type="radio"/> Not Apply	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3
Seller F	3	10.00	<input type="radio"/> Apply <input type="radio"/> Not Apply	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3

Calculate

Will your product be selected into the candidate pool, so that you will be returned the application deposit of 0.1 COIN?

Will the true quality of your product be revealed to buyers in Stage 3?

Will you need to pay a lying fee ($=(10 - \text{Price} \times \text{Number of products sold})$ for reporting a false quality?

(Price	- Cost per product sold)	+ Number of products sold	- Application deposit paid	+ Application deposit returned	- Lying fee paid	= Seller's payoff

Submit

RandomTesting

Comprehension Question 2

Your answer to the previous question is correct. Now let's continue to answer the following question. Suppose in a certain round, at the end of Stage 1, six sellers make the following decisions on qualities and prices.

Seller ID	Quality	Price	Cost per product sold
Seller A	2	1.00	4
Seller B	1	2.00	1
Seller C	2	3.00	4
Seller D	3	4.00	9
Seller E	2	5.00	4
Seller F	3	5.00	9

Suppose that you were Seller B.

Suppose you estimated that your (Seller B's) product will be **purchased by 2 buyers** (in other words, you estimated that the number of products sold is 2). Please use the calculator on the right to calculate your (Seller B's) payoff in this round according to this estimation.

Note: This calculator will also be available to you later in each round of the experiment.

Please enter your (Seller B's) payoff according to this estimation:

Seller payoff calculator

The quality of your product: ☐ 1 ☐ 2 ☐ 3

The price of your product:

Number of buyers who purchase your product:

Calculate

Will the quality of your product be revealed to buyers in Stage 2?

33% chance that the quality of your product will be revealed to buyers.

(Price	- Cost per product sold)	+ Number of products sold	= Seller's payoff

Submit

Comprehension Question 4

Your answer to the previous question is correct. Now let's continue to answer the following question.

Let's continue looking at the previous example. Suppose that Sellers A and E's products are tested by the **quality testing organization**. The **true quality** of Seller A's product is revealed to buyers, while the **true quality** of Seller E's product is not (because Seller E reported a false quality). The **true qualities** of all the other 4 sellers are also hidden to buyers.

Suppose that your **individual valuation of quality** in this round is 4.

Seller ID	Quality	Price
Seller A	2	1.00
Seller B	...	2.00
Seller C	...	3.00
Seller D	...	4.00
Seller E	...	5.00
Seller F	...	5.00

Buyer payoff calculator			
Quality	* Individual valuation of quality	- Price	= Your earnings
<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3	4		0.00
			<input type="button" value="Calculate"/>

Question 4: We know that the true quality of Seller A's product is 2. How much payoff can you earn, if you purchase a product from Seller A?

You can use the payoff calculator on the right to help you answer these questions (this calculator will also be available to you when you are making decisions in the experiment).

Comprehension Question 5

Your answer to the previous question is correct. Now let's continue to answer the following question.

Suppose that there are 3 sellers, Sellers G, H and I, who offer products with true qualities of 1, 2 and 3 respectively. Suppose that each of these 3 sellers charges a price equal to the corresponding **cost per product sold**.

Let's write the **cost per product sold** of a quality 1 product as c_1 , the **cost per product sold** of a quality 2 product as c_2 , and the **cost per product sold** of a quality 3 product as c_3 .

(Note: You are a seller, so you know that $c_1 = 1$, $c_2 = 4$ and $c_3 = 9$. However, recall that buyers do not know the values of c_1 , c_2 or c_3 .)

The table below summarizes these 3 sellers' true qualities, costs per product sold and prices:

	True quality	Cost per product sold	Price
Seller G	1	c_1	c_1
Seller H	2	c_2	c_2
Seller I	3	c_3	c_3

Question 5.1: For a buyer whose **individual valuation of quality** is 4, which seller's product gives this buyer the highest payoff, among these 3 sellers' products? ☐ Seller G's product ☐ Seller H's product ☐ Seller I's product

Question 5.2: For a buyer whose **individual valuation of quality** is 8, which seller's product gives this buyer the highest payoff, among these 3 sellers' products? ☐ Seller G's product ☐ Seller H's product ☐ Seller I's product

You can click the "Payoffs" button on the top-right corner to check the summary of instructions to help you answer this question.

Summary of instructions

The experiment will now start

Now everyone has completed the instructions and comprehension questions, and we can start the experiment.
Please click "I am ready" if you are ready to start.

I am ready

SellersMayApply	Round 1 of 2	Stage 1 of 3	Summary of instructions																																																													
<p>You are Seller 1 in this round.</p> <p>Please decide the quality and price of your product.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Quality</th> <th style="width: 33%;">Price</th> <th style="width: 33%;">Cost per product sold</th> </tr> </thead> <tbody> <tr> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> <td style="background-color: #e0e0ff;"></td> <td style="text-align: center;">0</td> </tr> </tbody> </table> <p style="text-align: right; margin-top: 10px;">Submit</p>		Quality	Price	Cost per product sold	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3		0	<div style="text-align: right; margin-bottom: 10px;"> Basic info Procedures Payoffs </div> <p>Feel free to use the calculator below if needed.</p> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">Seller payoff calculator</p> <p style="margin: 0;">Number of buyers who purchase your product: </p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Seller ID</th> <th style="width: 10%;">True Quality</th> <th style="width: 10%;">Price</th> <th style="width: 10%;">Apply for quality testing?</th> <th style="width: 10%;">Reported quality</th> </tr> </thead> <tbody> <tr> <td style="color: red;">Seller 1 (You)</td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> <td style="background-color: #e0e0ff;"></td> <td> <input type="checkbox"/> Apply <input type="checkbox"/> Not Apply </td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> </tr> <tr> <td>Seller 2</td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> <td style="background-color: #e0e0ff;"></td> <td> <input type="checkbox"/> Apply <input type="checkbox"/> Not Apply </td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> </tr> <tr> <td>Seller 3</td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> <td style="background-color: #e0e0ff;"></td> <td> <input type="checkbox"/> Apply <input type="checkbox"/> Not Apply </td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> </tr> <tr> <td>Seller 4</td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> <td style="background-color: #e0e0ff;"></td> <td> <input type="checkbox"/> Apply <input type="checkbox"/> Not Apply </td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> </tr> <tr> <td>Seller 5</td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> <td style="background-color: #e0e0ff;"></td> <td> <input type="checkbox"/> Apply <input type="checkbox"/> Not Apply </td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> </tr> <tr> <td>Seller 6</td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> <td style="background-color: #e0e0ff;"></td> <td> <input type="checkbox"/> Apply <input type="checkbox"/> Not Apply </td> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 5px;">Calculate</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 60%;">Will your product be selected into the candidate pool, so that you will be returned the application deposit of 0.1 ECUs?</td> <td style="width: 40%;"></td> </tr> <tr> <td>Will the true quality of your product be revealed to buyers in Stage 3?</td> <td></td> </tr> <tr> <td>Will you need to pay a lying fee (= 10 + Price x Number of products sold) for reporting a false quality?</td> <td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">(Price)</th> <th style="width: 10%;">- Cost per product sold</th> <th style="width: 10%;">+ Number of products sold</th> <th style="width: 10%;">- Application deposit paid</th> <th style="width: 10%;">+ Application deposit returned</th> <th style="width: 10%;">- Lying fee paid</th> <th style="width: 10%; color: red;">Seller's payoff</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> </div>		Seller ID	True Quality	Price	Apply for quality testing?	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Will the true quality of your product be revealed to buyers in Stage 3?		Will you need to pay a lying fee (= 10 + Price x Number of products sold) for reporting a false quality?		(Price)	- Cost per product sold	+ Number of products sold	- Application deposit paid	+ Application deposit returned	- Lying fee paid	Seller's payoff							
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SellersMayApply

Round 1 of 2

Stage 2 of 3

Summary of instructions

[Basic Info](#)
[Procedures](#)
[Payoffs](#)

You are **Seller 1** in this round.

You have decided the quality and price of your product.

Quality	Price	Cost per product sold
1	2.00	1

Please decide whether you would like to apply for quality testing. ☐ Yes, I would like to apply ☐ No, I do not want to apply

Please report your quality to the quality testing organization. If the quality testing organization tests and finds out that you have reported a false quality, then you will pay a lying fee (i.e. $10 \times \text{Price} \times \text{Number of products sold}$), and the quality of your product will not be revealed to the buyers in Stage 3.

Seller ID	Quality	Price	Cost per product sold
Seller 1 (You)	1	2.00	1
Seller 2	2	5.00	4
Seller 3	3	10.00	9
Seller 4	2	7.00	4
Seller 5	2	6.00	4
Seller 6	3	9.00	9

30
25
20
15
10
5
0

1 2 3

Quality

Submit

Feed free to use the calculator below if needed.

Seller payoff calculator

Number of buyers who purchase your product

Seller ID	True Quality	Price	Apply for quality testing?	Reported quality
Seller 1 (You)	1	2.00	<input type="checkbox"/> Apply <input type="checkbox"/> Not Apply	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3
Seller 2	2	5.00	<input type="checkbox"/> Apply <input type="checkbox"/> Not Apply	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3
Seller 3	3	10.00	<input type="checkbox"/> Apply <input type="checkbox"/> Not Apply	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3
Seller 4	2	7.00	<input type="checkbox"/> Apply <input type="checkbox"/> Not Apply	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3
Seller 5	2	6.00	<input type="checkbox"/> Apply <input type="checkbox"/> Not Apply	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3
Seller 6	3	9.00	<input type="checkbox"/> Apply <input type="checkbox"/> Not Apply	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3

Calculate

Will your product be selected into the candidate pool, so that you will be returned the application deposit of 0.1 PCTUB?

Will the true quality of your product be revealed to buyers in Stage 3?

Will you need to pay a lying fee (i.e. $10 \times \text{Price} \times \text{Number of products sold}$) for reporting a false quality?

(Price	- Cost per product sold)	+ Number of products sold	- Application deposit paid	+ Application deposit returned	- Lying fee paid	= Seller's payoff

SellersMayApply

Round 1 of 2

Stage 3 of 3

Summary of instructions

[Basic Info](#)
[Procedures](#)
[Payoffs](#)

You are **Buyer 1** in this round. Your individual valuation of quality in this round is 4.

The sellers have made their decisions. The quality testing organization has tested some products, and the qualities of these products are revealed. Please decide whether you want to buy a product and if so, from which seller you would like to buy.

Seller ID	Quality	Price
Seller 1	...	2.00
Seller 2	...	5.00
Seller 3	...	10.00
Seller 4	...	7.00
Seller 5	...	6.00
Seller 6	3	9.00

30
25
20
15
10
5
0

1 2 3

Quality

Revealed products

Note: All sellers' IDs are reshuffled after each round.

Please choose which seller you want to buy a product from. ☐ Seller 1 ☐ Seller 2 ☐ Seller 3 ☐ Seller 4 ☐ Seller 5 ☐ Seller 6 ☐ I do not want to buy a product

Submit

Feed free to use the calculator below if needed.

Buyer payoff calculator

Individual valuation of quality	+ Quality	- Price	= Your earnings
4	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3		0.00

Calculator

SellersMayApply

Round 1 of 2

Stage 3 of 3

You are **Seller 1** in this round.

Please wait for buyers to make decisions.

Below is the information buyers are currently able to see.

Seller ID	Quality	Price
Seller 1	...	2.00
Seller 2	...	5.00
Seller 3	...	10.00
Seller 4	...	7.00
Seller 5	...	6.00
Seller 6	3	9.00

SellersMayApply

Round 1 of 2

Round completed

You are **Seller 1** in this round.

In Round 1, you sold 0 product(s).
Your earnings in this round are 0.00 ECUs.

(Price	- Cost per product sold)	* Number of products sold	- Application deposit paid	+ Application deposit returned	- Lying fee paid	= Your earnings in this round
2.00	1	0	0.00	0.00	0.00	0.00

OK

SellersMayApply	Round 1 of 2	Round completed								
<p>You are Buyer 1 in this round. Your individual valuation of quality in this round is 4.</p>										
<p style="text-align: center;">In Round 1, you choose to buy a product from Seller 3. Your earnings in this round are 2.00 ECUs.</p>										
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Individual valuation of quality</th> <th style="width: 25%;">* Quality</th> <th style="width: 25%;">- Price</th> <th style="width: 25%;">= Your earnings</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">2</td> <td style="text-align: center;">6.00</td> <td style="text-align: center;">2.00</td> </tr> </tbody> </table>			Individual valuation of quality	* Quality	- Price	= Your earnings	4	2	6.00	2.00
Individual valuation of quality	* Quality	- Price	= Your earnings							
4	2	6.00	2.00							
<input type="button" value="OK"/>										

RandomTesting	Round 1 of 2	Stage 1 of 2	Summary of instructions																		
<p>You are Seller 1.</p>		<div style="text-align: center;"> <input type="button" value="Basic Info"/> <input type="button" value="Procedures"/> <input type="button" value="Payoffs"/> </div>																			
<p>Please decide the quality and price of your product.</p> <table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Quality</th> <th style="width: 30%;">Price</th> <th style="width: 40%;">Cost per product sold</th> </tr> </thead> <tbody> <tr> <td> <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 </td> <td style="background-color: #e0e0ff;"></td> <td style="text-align: center;">0</td> </tr> </tbody> </table> <div style="text-align: center; margin-top: 10px;"> <input type="button" value="Submit"/> </div>		Quality	Price	Cost per product sold	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3		0	<p>Feel free to use the calculator below if needed.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;">Seller payoff calculator</p> <p>The quality of your product: <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3</p> <p>The price of your product: <input style="width: 50px;" type="text"/></p> <p>Number of buyers who purchase your product: <input style="width: 50px;" type="text"/></p> <p style="text-align: center;"><input type="button" value="Calculate"/></p> </div> <table border="1" style="margin-top: 10px; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Will the quality of your product be revealed to buyers in Stage 2?</th> <th colspan="2" style="text-align: left;">33% chance that the quality of your product will be revealed to buyers</th> </tr> <tr> <th style="width: 25%;">(Price</th> <th style="width: 25%;">- Cost per product sold)</th> <th style="width: 25%;">* Number of products sold</th> <th style="width: 25%;">= Seller's payoff</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Will the quality of your product be revealed to buyers in Stage 2?		33% chance that the quality of your product will be revealed to buyers		(Price	- Cost per product sold)	* Number of products sold	= Seller's payoff				
Quality	Price	Cost per product sold																			
<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3		0																			
Will the quality of your product be revealed to buyers in Stage 2?		33% chance that the quality of your product will be revealed to buyers																			
(Price	- Cost per product sold)	* Number of products sold	= Seller's payoff																		

RandomTesting

Round 1 of 2

Stage 2 of 2

You are Buyer 1.

The sellers have made their decisions. The quality test organization has tested some products, and the qualities of these products are revealed. Please decide whether you want to buy a product and if so, from which seller you would like to buy.

Seller ID	Quality	Price
Seller 1	1	2.00
Seller 2	...	5.00
Seller 3	2	6.00
Seller 4	...	10.00
Seller 5	...	12.00
Seller 6	...	14.00

25

20

15

10

5

0

1 2 3

Quality

Please choose which seller you want to buy a product from.

☐ Seller 1

☐ Seller 2

☐ Seller 3

☐ Seller 4

☐ Seller 5

☐ Seller 6

☐ I do not want to buy a product

Submit

Summary of Instructions

[Review Tests](#)

[Proceedures](#)

[Feedbacks](#)

Feel free to use the calculator below if needed.

Buyer payoff calculator

Quality	* Individual valuation of quality	- Price	= Your earnings
<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3	4	<input style="width: 50px;" type="text"/>	0.00

Calculator

RandomTesting

Round 1 of 2

Stage 2 of 2

You are Seller 1.

Please wait for buyers to make decisions.

Below is the information buyers are currently able to see.

Seller ID	Quality	Price
Seller 1	1	2.00
Seller 2	...	5.00
Seller 3	2	6.00
Seller 4	...	10.00
Seller 5	...	12.00
Seller 6	...	14.00

The scatter plot displays the relationship between Quality (x-axis) and Price (y-axis). The x-axis ranges from 1 to 3, and the y-axis ranges from 0 to 25. Two data points are plotted: a blue dot at (1, 2) labeled 'A1' and a red dot at (2, 6) labeled 'A3'.

RandomTesting

Round 1 of 2

Round completed

You are Buyer 1.

You have completed Round 1.

In this round, you choose to purchase a product from Seller 1.

Please click "OK" to move on.

OK

RandomTesting

Round 1 of 2

Round completed

You are Seller 1.

In Round 1, you sold 3 product(s).

Your earnings in this round are 3.00 ECUs.

Price	- Cost per product sold	* Number of products sold	= Your earnings in this round
2.00	1	3	3.00

OK

Round 1 of 1

Stage 3 of 3

Summary of Instructions

Review Task

Feedback

Pause/End

You are **Buyer 1** in this round. Your **individual valuation of quality** in this round is **4**.

Before we provide feedback about this round, please answer the following survey questions. You will receive 2 ECU's for answering these questions.

For each seller whose product quality is not revealed by the testing organization, what do you think is the probability that the quality of the product is 1, 2 and 3 respectively? Please enter a percentage (0 - 100) in each box.

Seller ID	Quality	Price	Probability of each quality level (The three numbers on each row should add up to 100)		
			Quality 1	Quality 2	Quality 3
Seller 1	...	2.00	Quality 1: <input type="text"/>	Quality 2: <input type="text"/>	Quality 3: <input type="text"/>
Seller 2	2	5.00	Quality 1: 0	Quality 2: 100	Quality 3: 0
Seller 3	...	5.50	Quality 1: <input type="text"/>	Quality 2: <input type="text"/>	Quality 3: <input type="text"/>
Seller 4	...	7.00	Quality 1: <input type="text"/>	Quality 2: <input type="text"/>	Quality 3: <input type="text"/>
Seller 5		10.00	Quality 1: <input type="text"/>	Quality 2: <input type="text"/>	Quality 3: <input type="text"/>
Seller 6	3	11.00	Quality 1: 0	Quality 2: 0	Quality 3: 100

Note: All sellers' IDs are reshuffled after each round.

Revealed products

OK