ECONOMIC EDUCATION | Consumer and Producer Surplus

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Consumer and Producer Surplus

Slide 5 - Discuss the difference between willingness to pay and the actual price paid. Notice different consumers value the bottled water differently.

Slide 6 - Tell the students that the slide is a graphical representation of the information on slide 6. Tell the students that although it is a stepped line, economists call it a demand curve.

Slide 7 - Answers provided for slide 7.

Slide 8 - Slide shade up to a price of $2.50 so that only those paying more than $2.50 are showing: Mycah, Emma, Jacob, and Isabella.

Slide 9 - Includes a red line showing the price. Ask students which consumers would not buy the bottled water.

Slide 10 - Explain that Rachel and Ethan would choose not to buy the bottled water because the are not willing pay $2.50. Or, they value the water less than the price of the water.

Slide 11 - Discuss the definition of consumer surplus with students. Have students calculate the consumer surplus for each character. Click on the individual shades to reveal answers.

Slide 12 - The entire market includes many potential buyers - because of the larger number of buyers, the stepped line becomes smooth. This line is the demand curve. The area above the price line and below the demand curve reflects the difference between what consumers are willing to pay and what they actually pay - it is the consumer surplus.

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Slide 13 - Because the shape is a triangle, use the formula to calculate the area of a triangle to calculate the value of the consumer surplus.

Slide 14 - Have students calculate the answer.

Slide 15 - Answer revealed. Consumer surplus is $3,200.

Slide 16 - The price has decreased to $2. Point out that this affects two groups. The consumers who would have purchased gadgets at $3 are gaining extra consumer surplus. In addition, at the lower price new buyers are willing to purchase an additional one hundred gadgets.

Slide 17 - Shows how the extra consumer surplus is allocated between existing and new customers.

Slide 18 - Calculate the increase in consumer surplus acquired by existing buyers (those who were also willing to buy at $3).

Slide 19 - Answer revealed. Consumer surplus is $800.

Slide 20 - Calculate the increase in consumer surplus resulting from new buyers.

Slide 21 - Answer revealed. Consumer surplus is $50.

Slide 22 - Using previous information, find the total increase in consumer surplus. Click the shades to reveal answers.

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Slide 23 - Slides 5-22 reflected the demand side of the market. The remaining slides focus on the supply side of the market. Tell the students that the grid reveals the lowest price each seller is willing to sell bottled water for.

Slide 24 - Tell the students that the slide is a graphical representation of the information on slide 23. Tell the students that although it is a stepped line, economists call it a supply curve. Discuss questions.

Slide 25 - Answers provided. Mia is willing to sell at $2. Jayden is willing to sell at $5.

Slide 26 - Slide shade down to a price of $2.50 so that only those willing to sell at a price less than $2.50 are showing: Mia and Anthony.

Slide 27 - Price line divides the characters into those who are willing to sell (below the line) and those who are not willing to sell at $2.50. Which characters are not willing to sell for $2.50? Noah, Chloe, Jayden, Abigail.

Slide 28 - Answers to slide 27 revealed. Discuss that Noah, Chloe, Jayden, and Abigail are not willing to sell for $2.50 because it is a price that is lower that their cost.

Slide 29 - Discuss the definition of producer surplus with students. Have students calculate the producer surplus for each character. Click on the individual shades to reveal answers.

Slide 30 - The entire market includes many potential sellers - because of the larger number of sellers, the stepped line becomes smooth. This line is the supply curve. The area below the price line and above the supply curve reflects the difference between the price sellers receive when they sell and the minimum price at which producers would willing to sell – it is the producer surplus.

Slide 31 - Because the shape is a triangle, use the formula to calculate the area of a triangle to calculate the value of the producer surplus.

Slide 32 - Have students calculate the answer. Producer surplus is $1,800.

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Slide 33 - Answer revealed. Producer surplus is $1,800.

Slide 34 - The price has increased to $8. Point out that this affects two groups. The producers who would have sold gadgets at $7 are gaining extra producer surplus. In a addition, at the higher price new producers are willing to sell an additional one hundred gadgets.

Slide 35 - Shows how the extra producer surplus is allocated between existing and new sellers.

Slide 36 - Calculate the increase in producer surplus acquired by existing sellers (those who were also willing to sell at $7).

Slide 37 - Answer revealed. Producer surplus is $600.

Slide 38 - Calculate the increase in Producer surplus resulting from new sellers. Answer: $50.

Slide 39 - Answer revealed. Producer surplus is $50.

Slide 40 - Using previous information, find the total increase in consumer surplus. Click the shades to reveal answers.

Slide 41 - Use the information to calculate total economic surplus. Click shades to reveal answers.

Slide 42 - Lesson conclusions

Consider the potential buyers of cold bottled water offered for sale on a hot summer day. People put different values on the bottled water - they have a differing willingness to pay.

Willingness to pay - The maximum amount a buyer will pay for a good.

	willingness to pay	price paid	consumer surplus
Isabella	6		
Jacob	5		
Emma	4		
Mycah	3		
Rachel	2		
Ethan	1		

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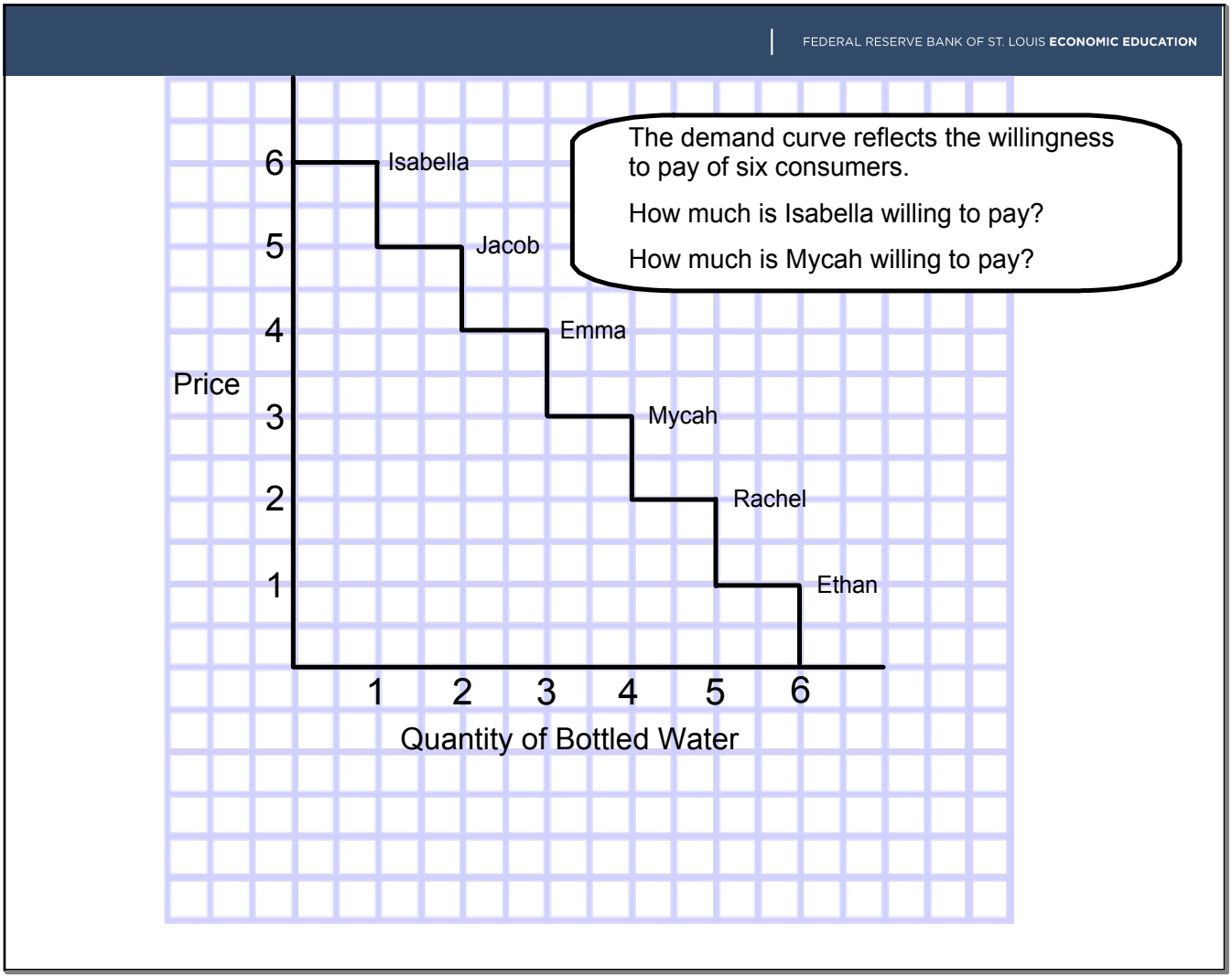

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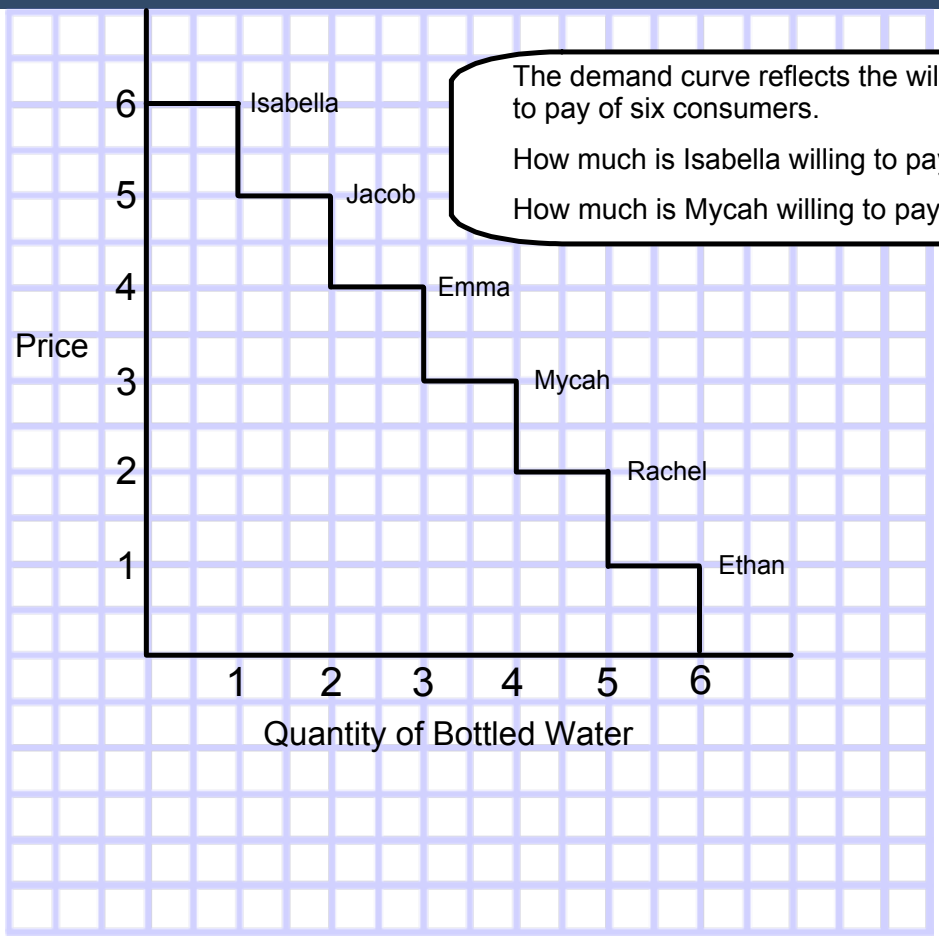

The demand curve reflects the willingness to pay of six consumers.

How much is Isabella willing to pay? 6

How much is Mycah willing to pay? 3

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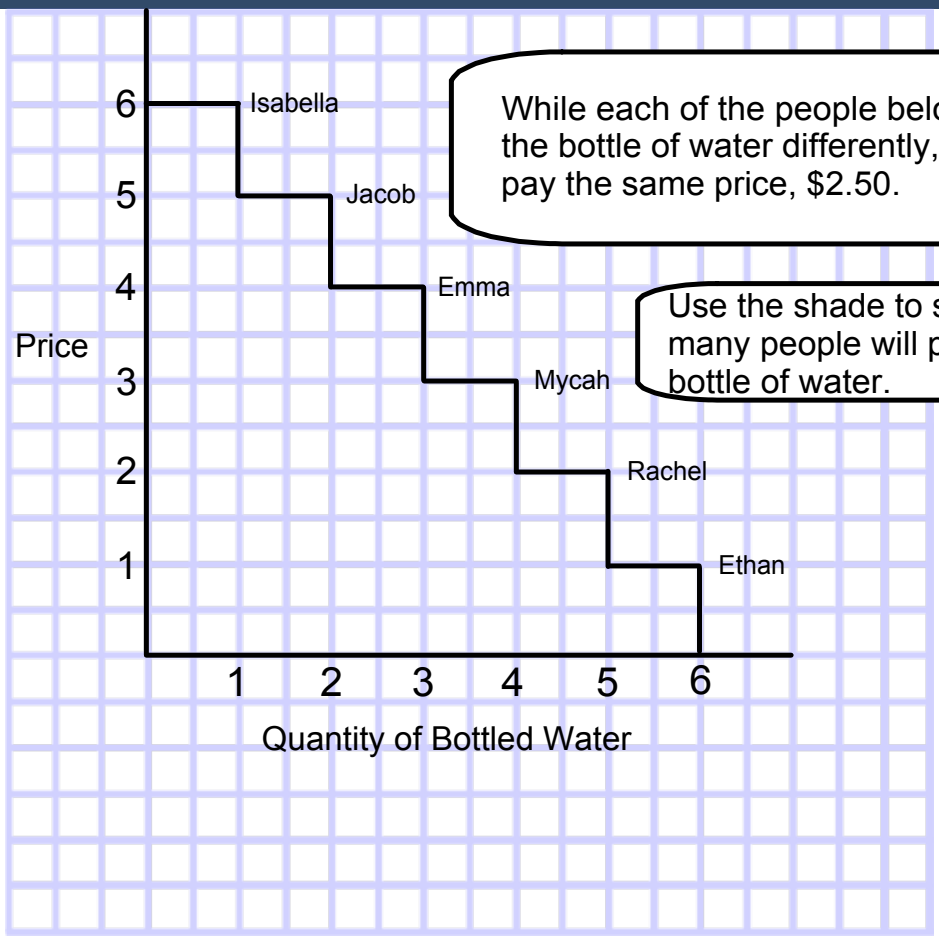

While each of the people below value the bottle of water differently, they each pay the same price, $2.50.

Use the shade to show how many people will purchase a bottle of water.

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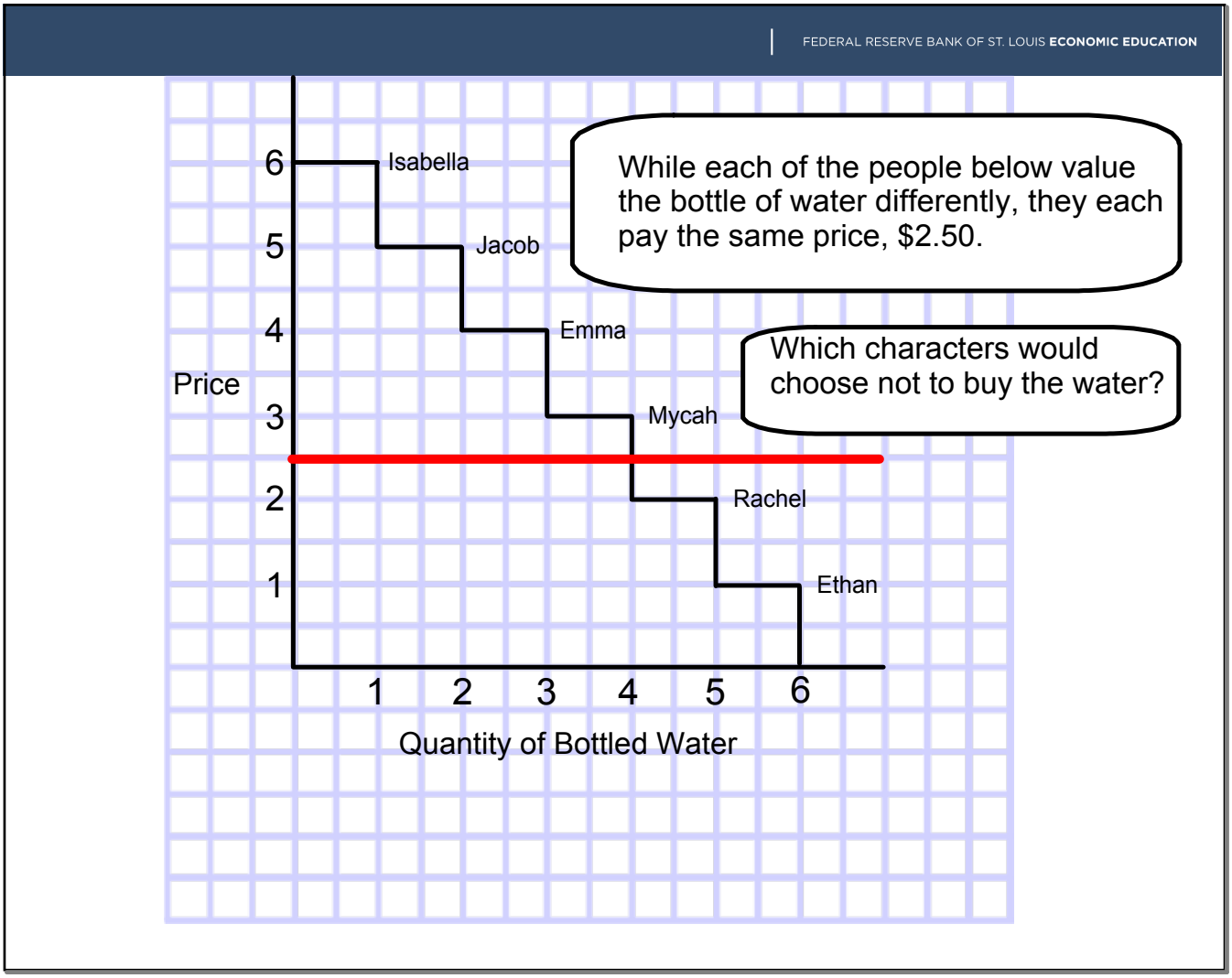

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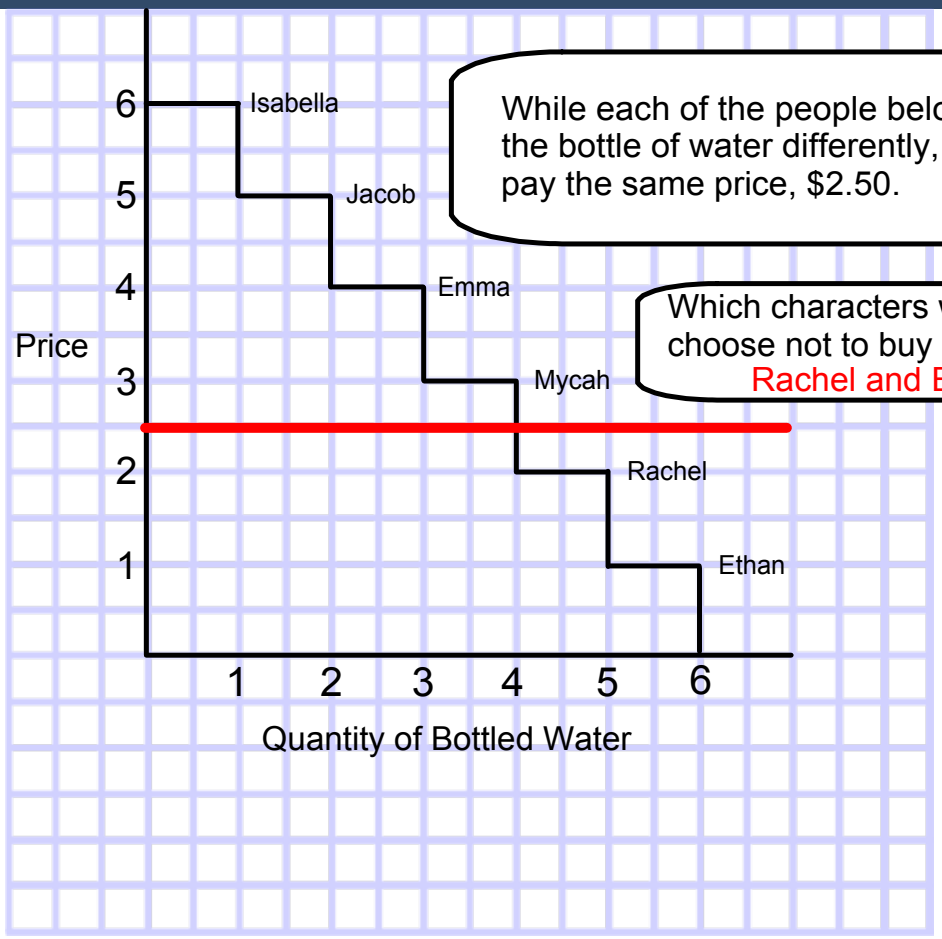

While each of the people below value the bottle of water differently, they each pay the same price, $2.50.

Which characters would choose not to buy the water?
Rachel and Ethan

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While each of the people below value the bottle of water differently, they each pay the same price, $2.50.

Consumer surplus is the difference between what consumers are willing to pay and what they actually pay.

Calculate the consumer surplus for each person.

	willingness to pay	price paid	consumer surplus
Isabella	$6	$2.50	
Jacob	$5	$2.50	
Emma	$4	$2.50	
Mycah	$3	$2.50	
Rachel	$2	-	
Ethan	$1	-	

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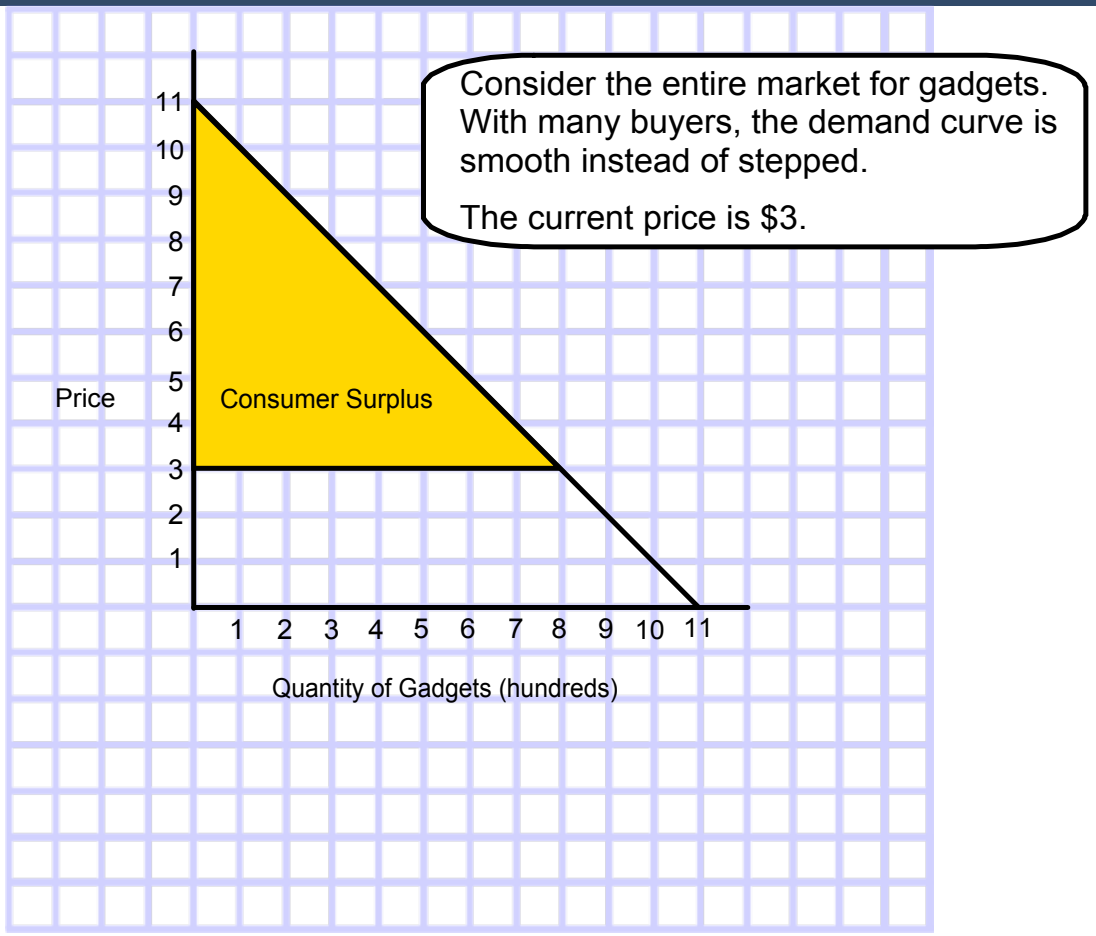

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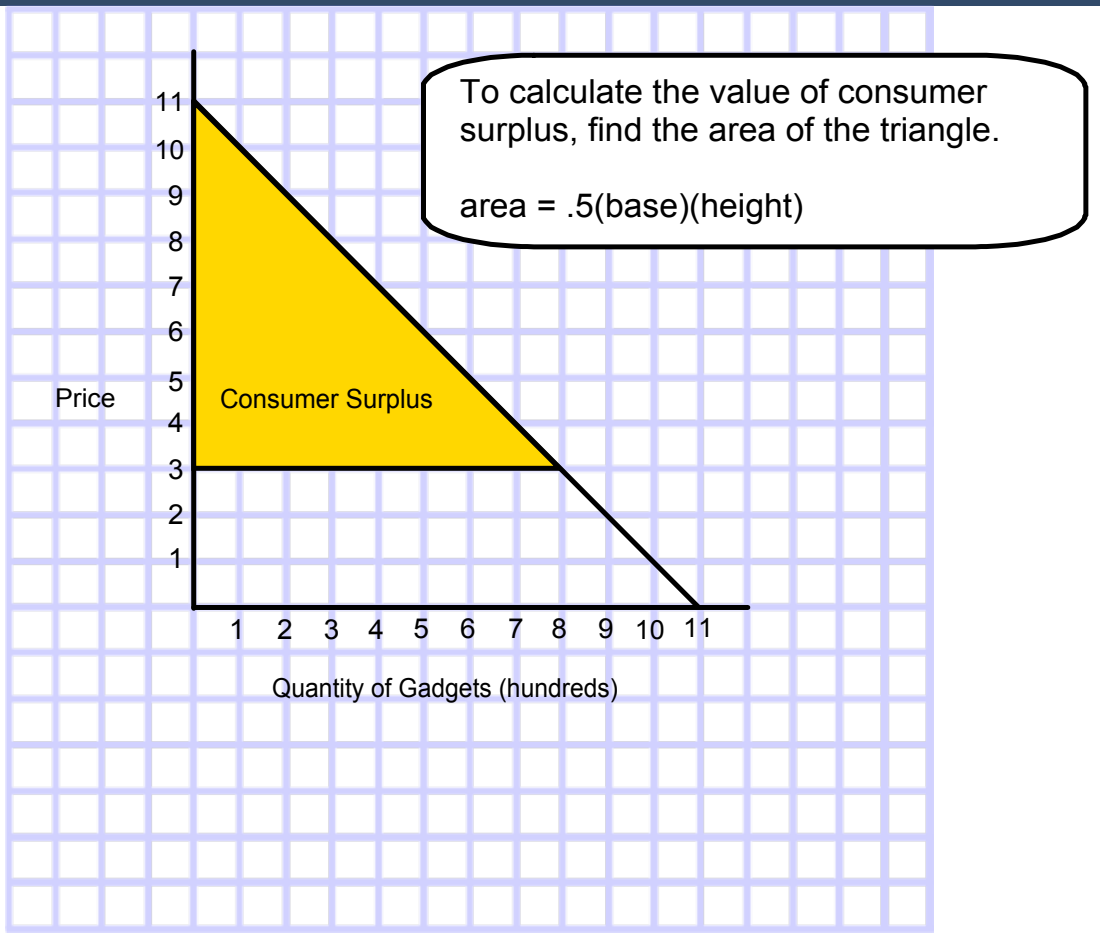

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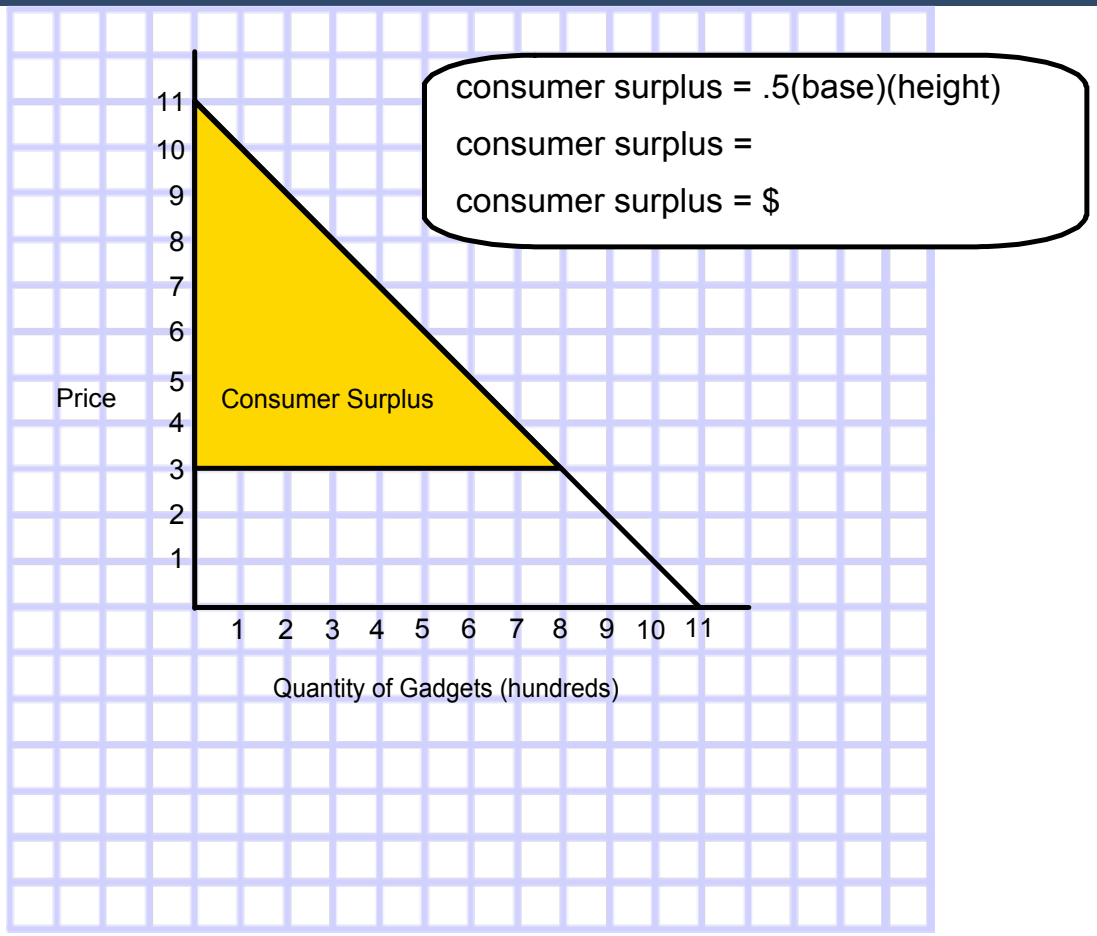

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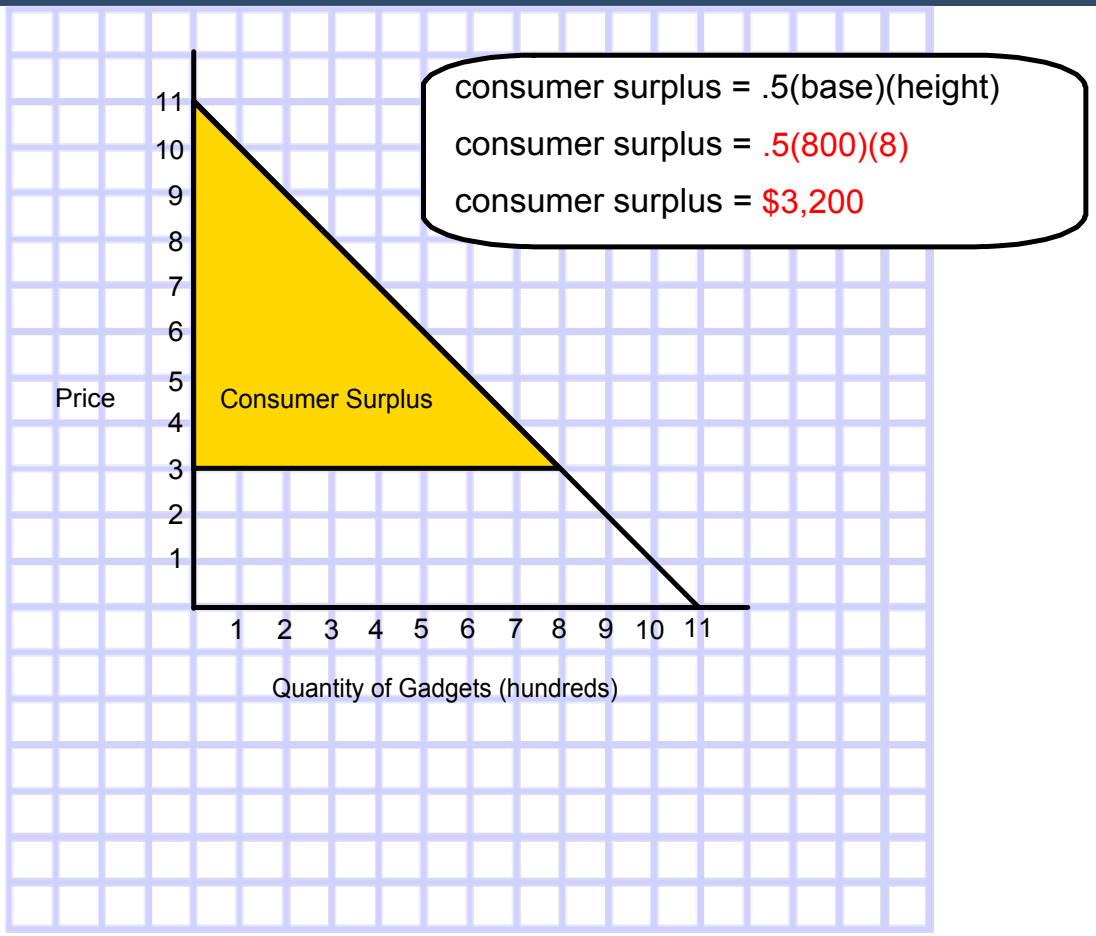

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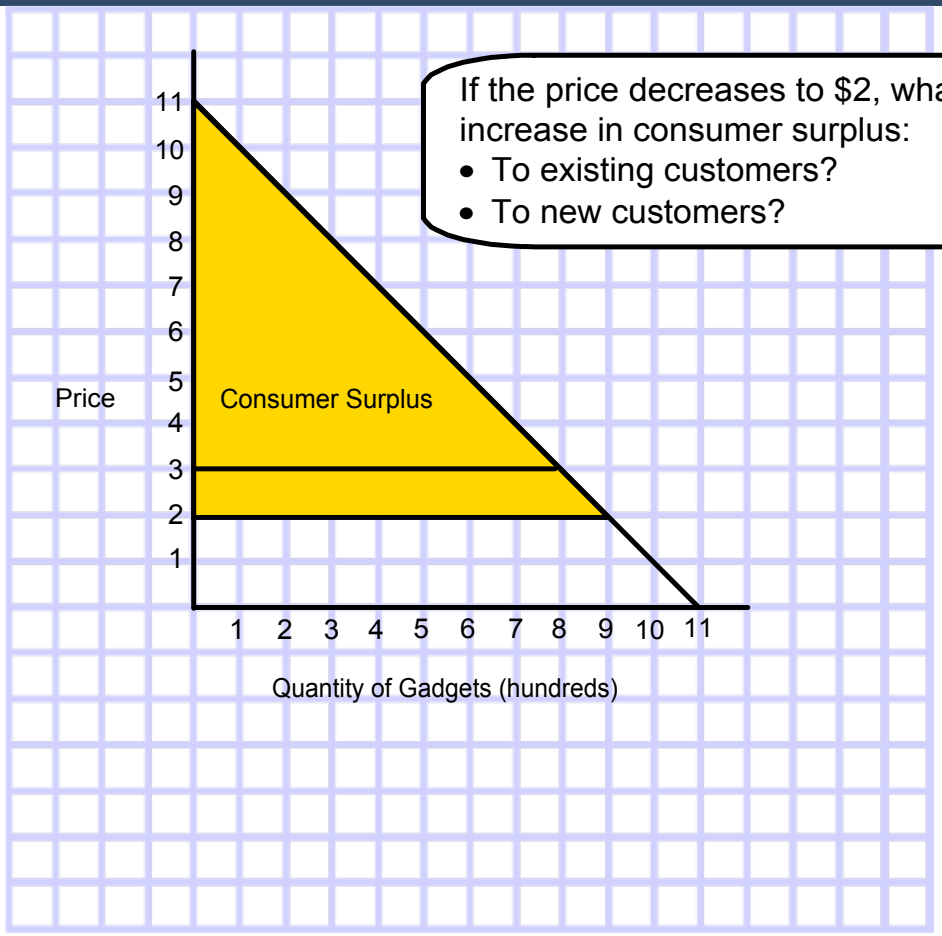
If the price decreases to $2, what is the increase in consumer surplus:

- To existing customers?
- To new customers?



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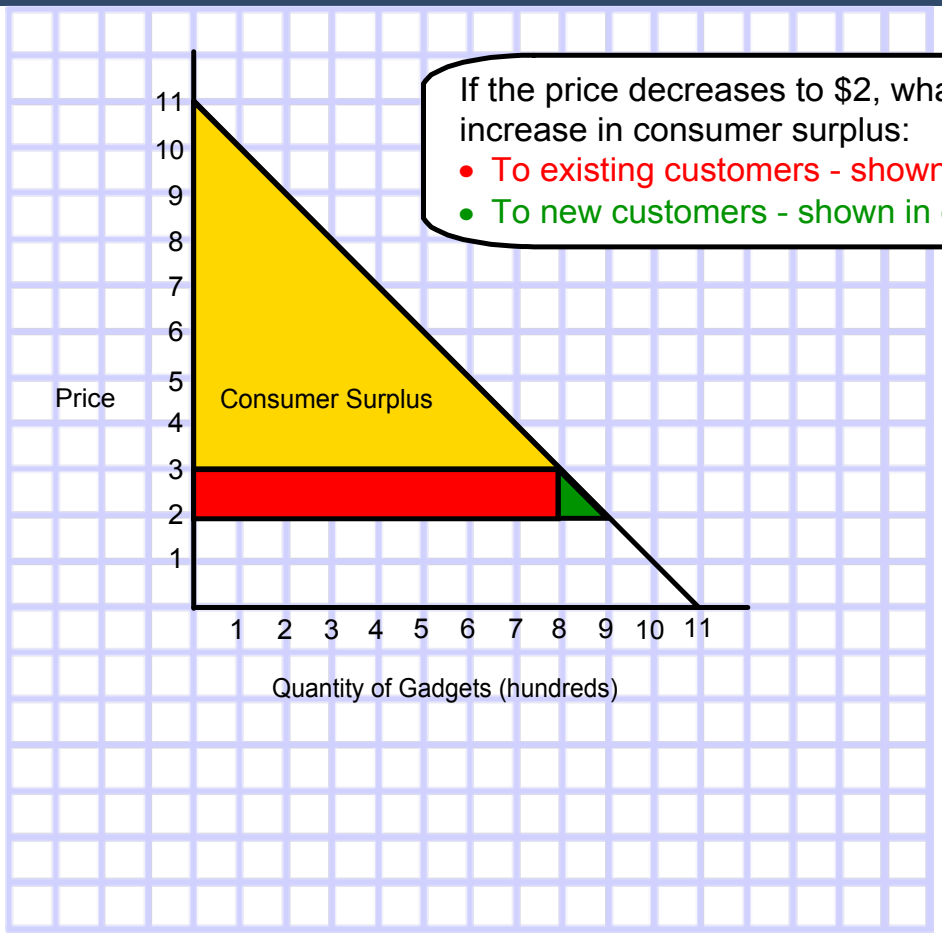
If the price decreases to $2, what is the increase in consumer surplus:

- To existing customers - shown in red.
- To new customers - shown in green.



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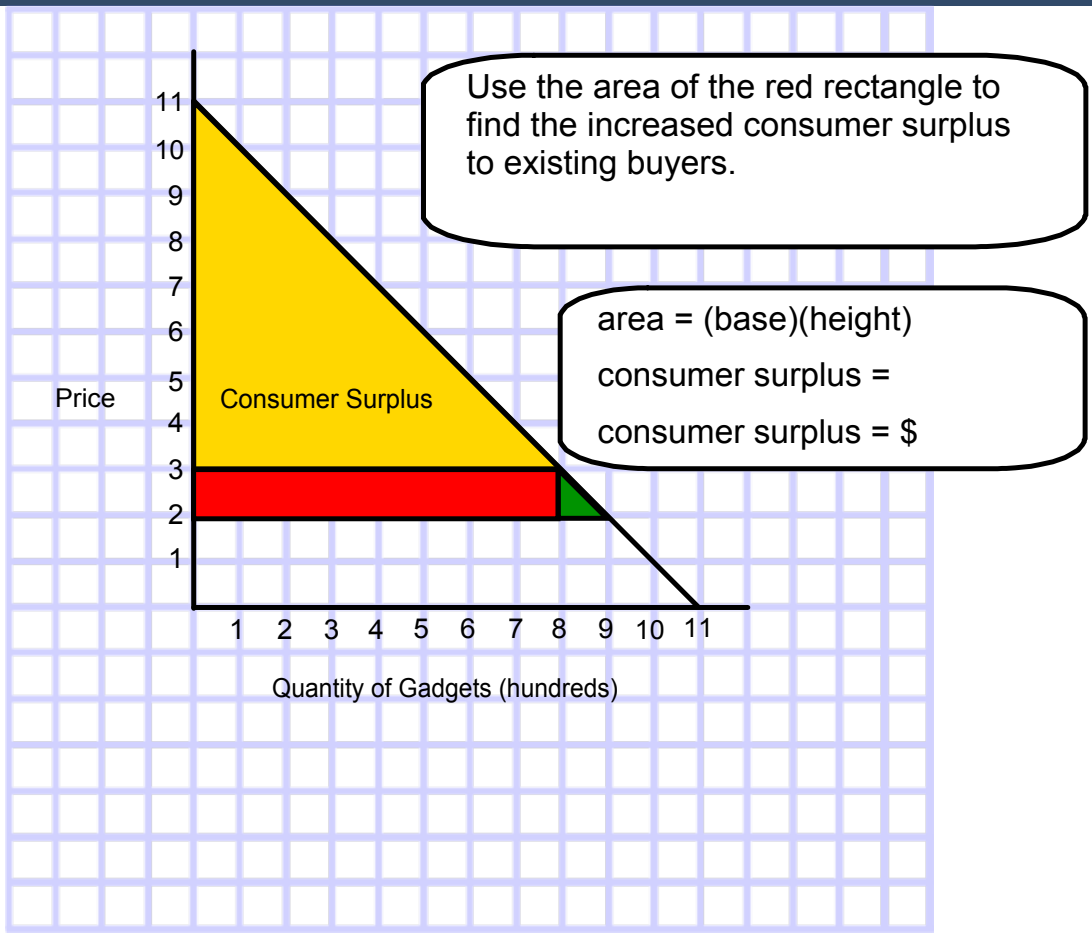

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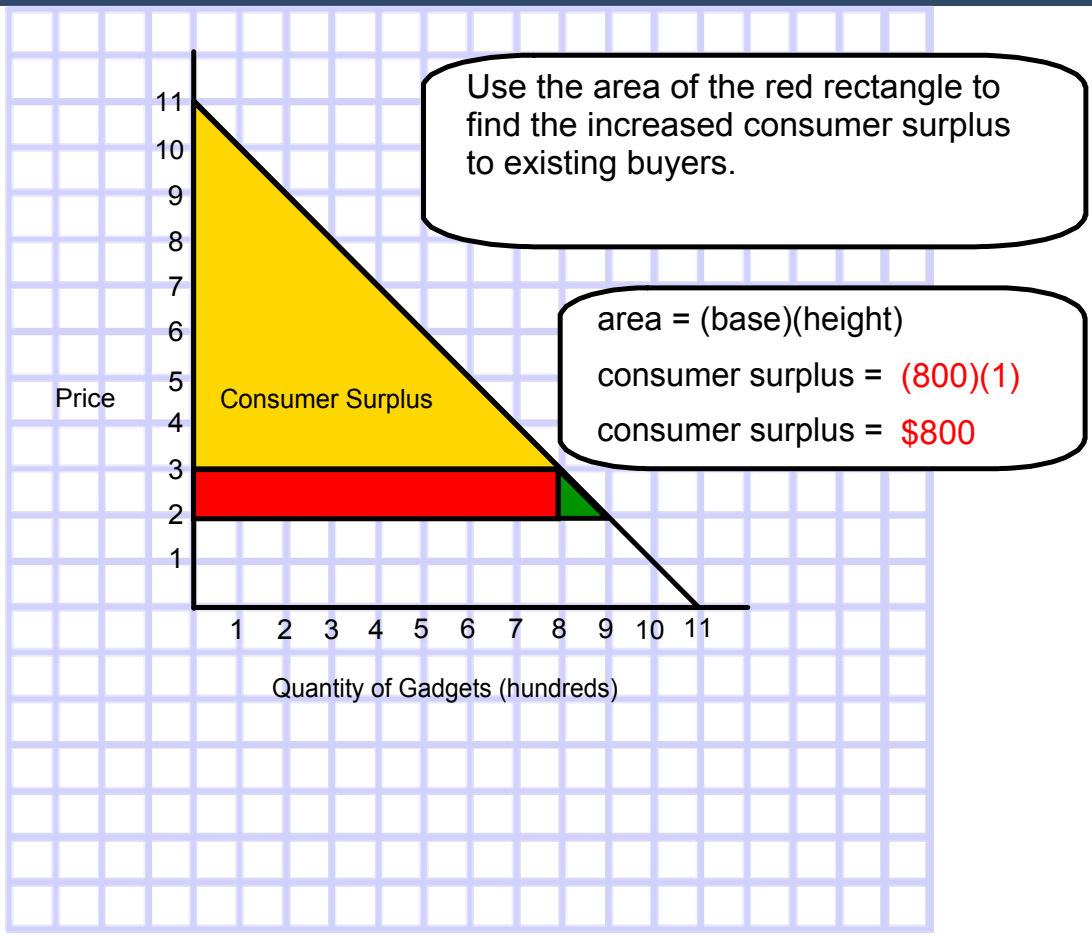

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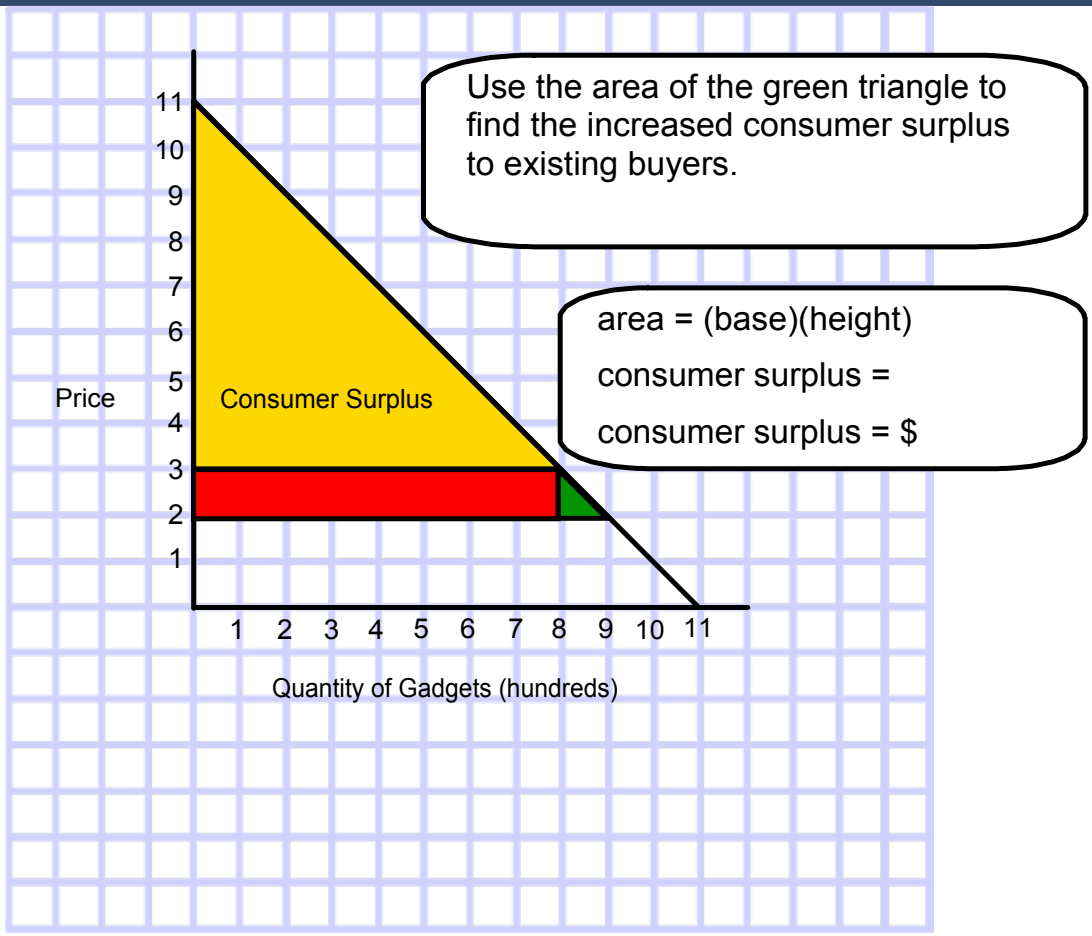

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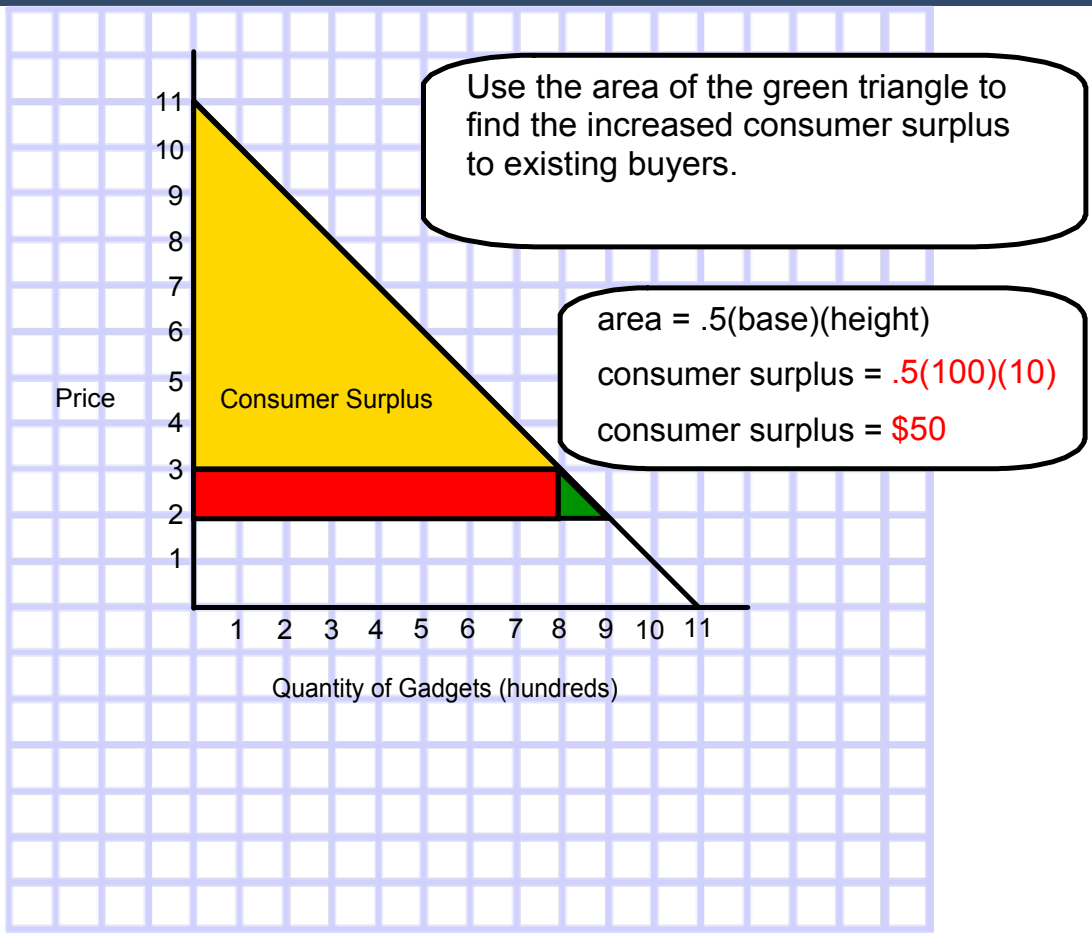

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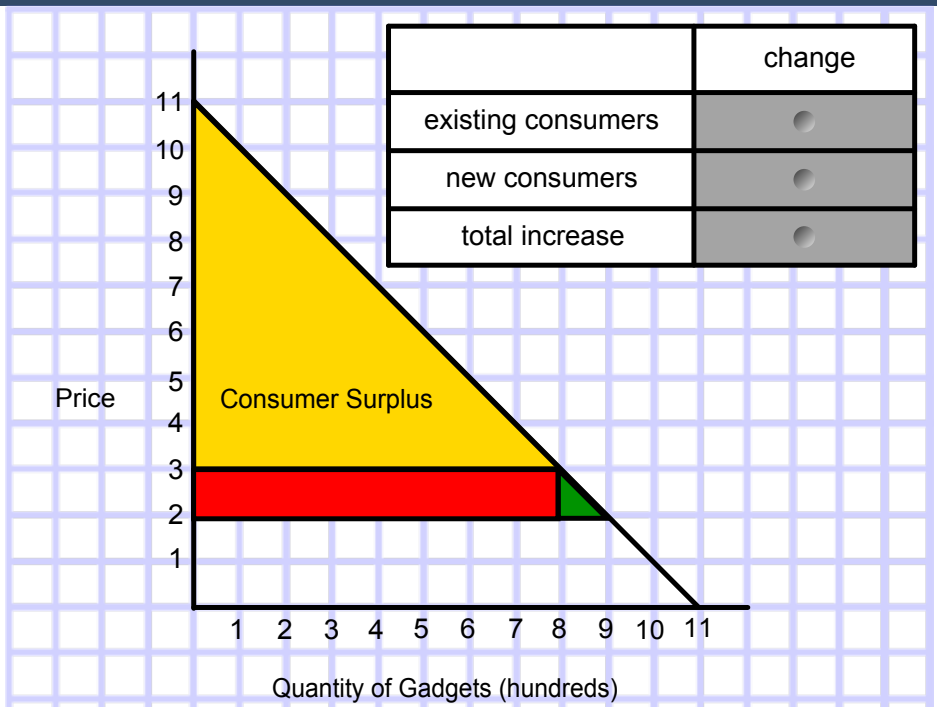

Use the chart to summarize what happens as a result of a $1 decrease in price.

- For existing consumers? For new consumers?
- Total increase in consumer surplus?

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Now consider the sellers of cold bottled water on a hot summer day. The seller's cost is the lowest price at which he or she would be willing to sell.

	cost	price received	producer surplus
Anthony	$1		
Mia	$2		
Noah	$3		
Chloe	$4		
Jayden	$5		
Abigail	$6		

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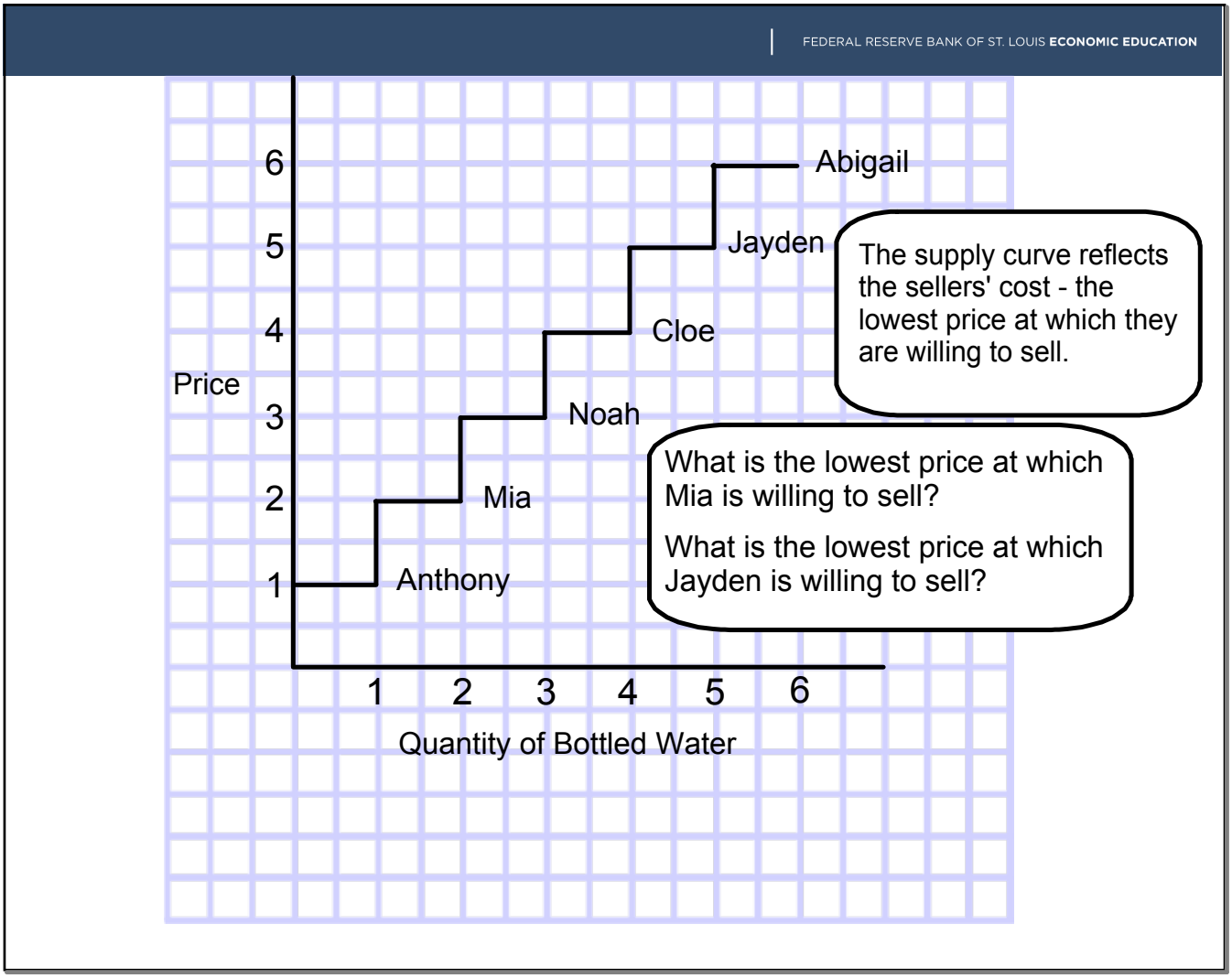

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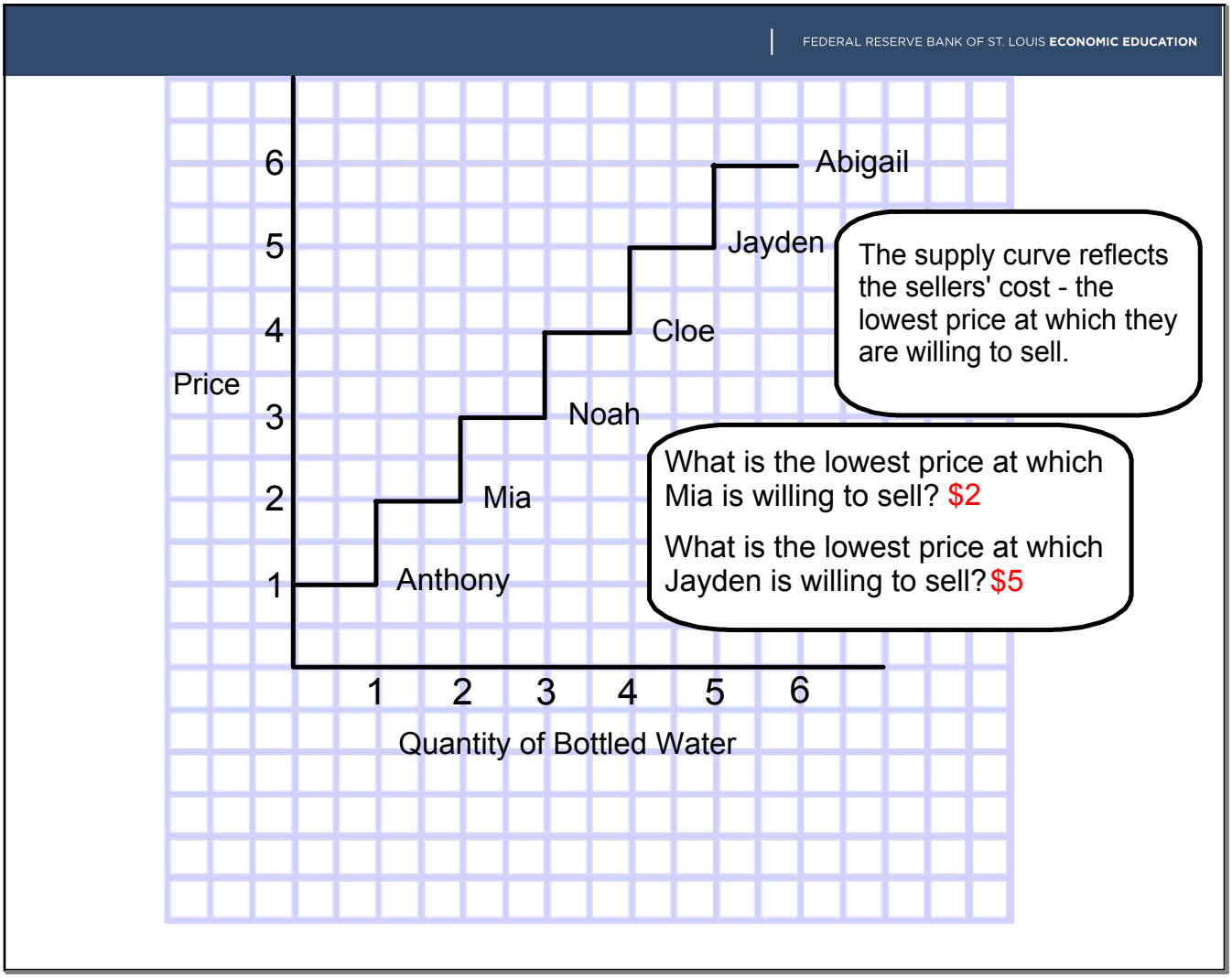

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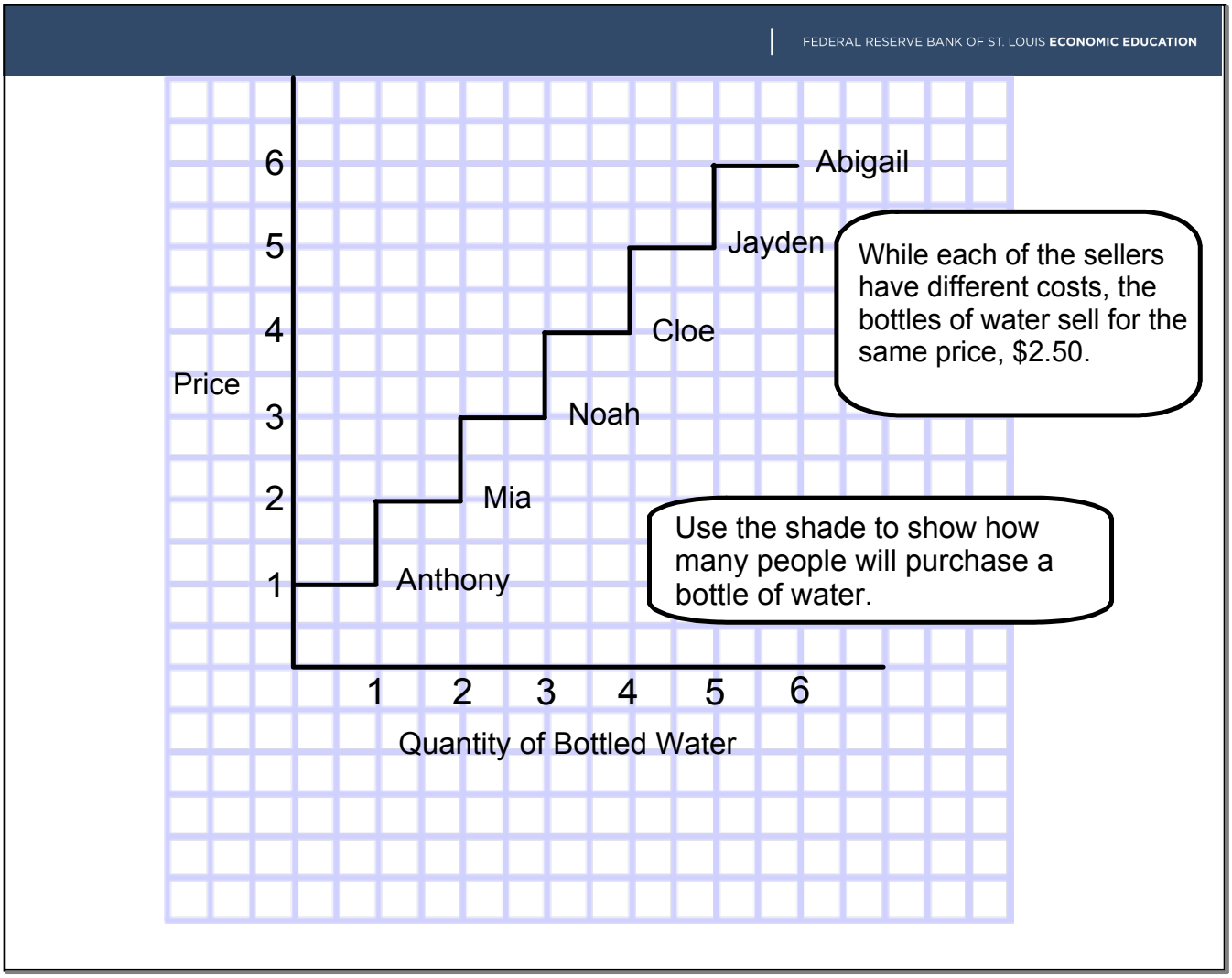

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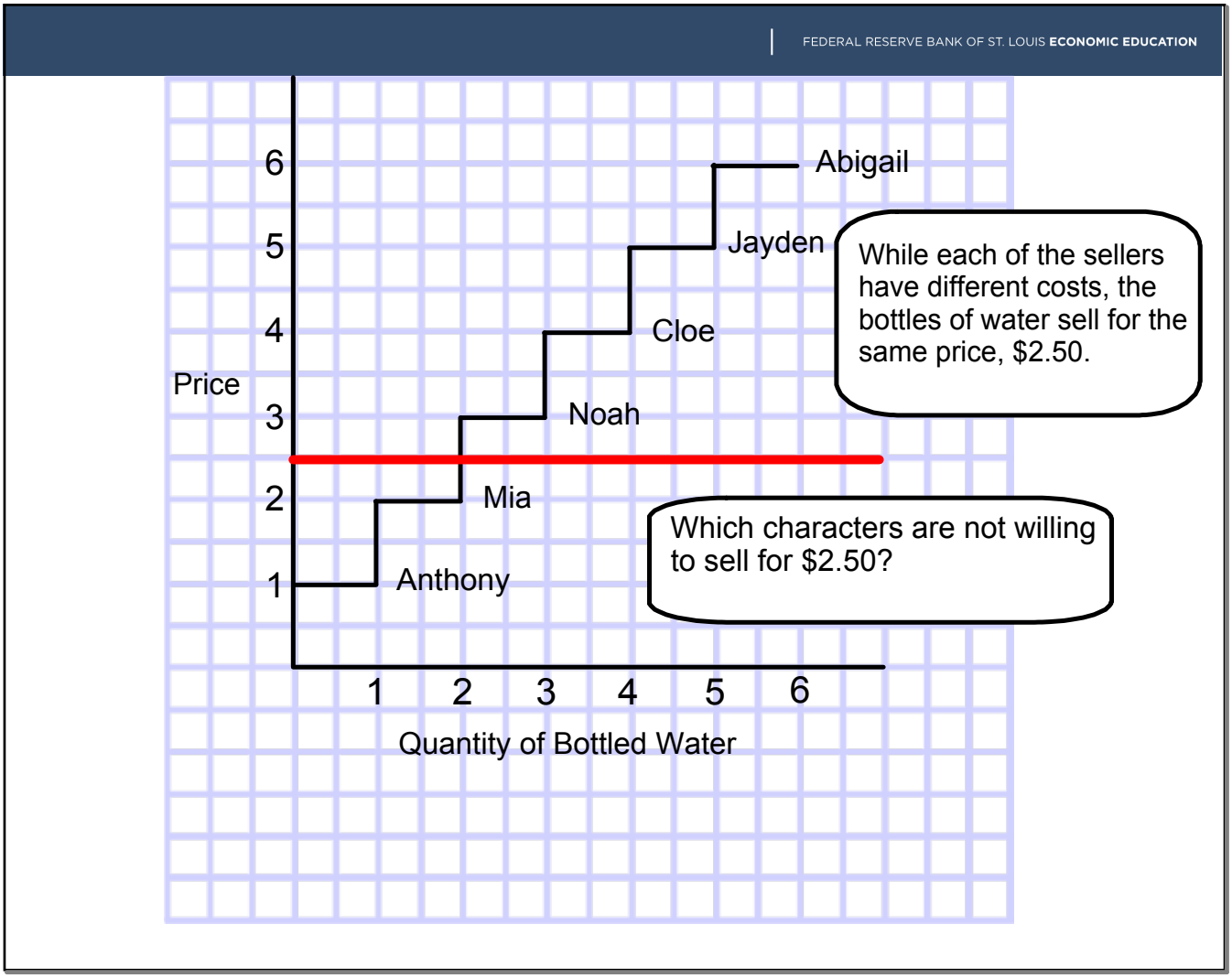

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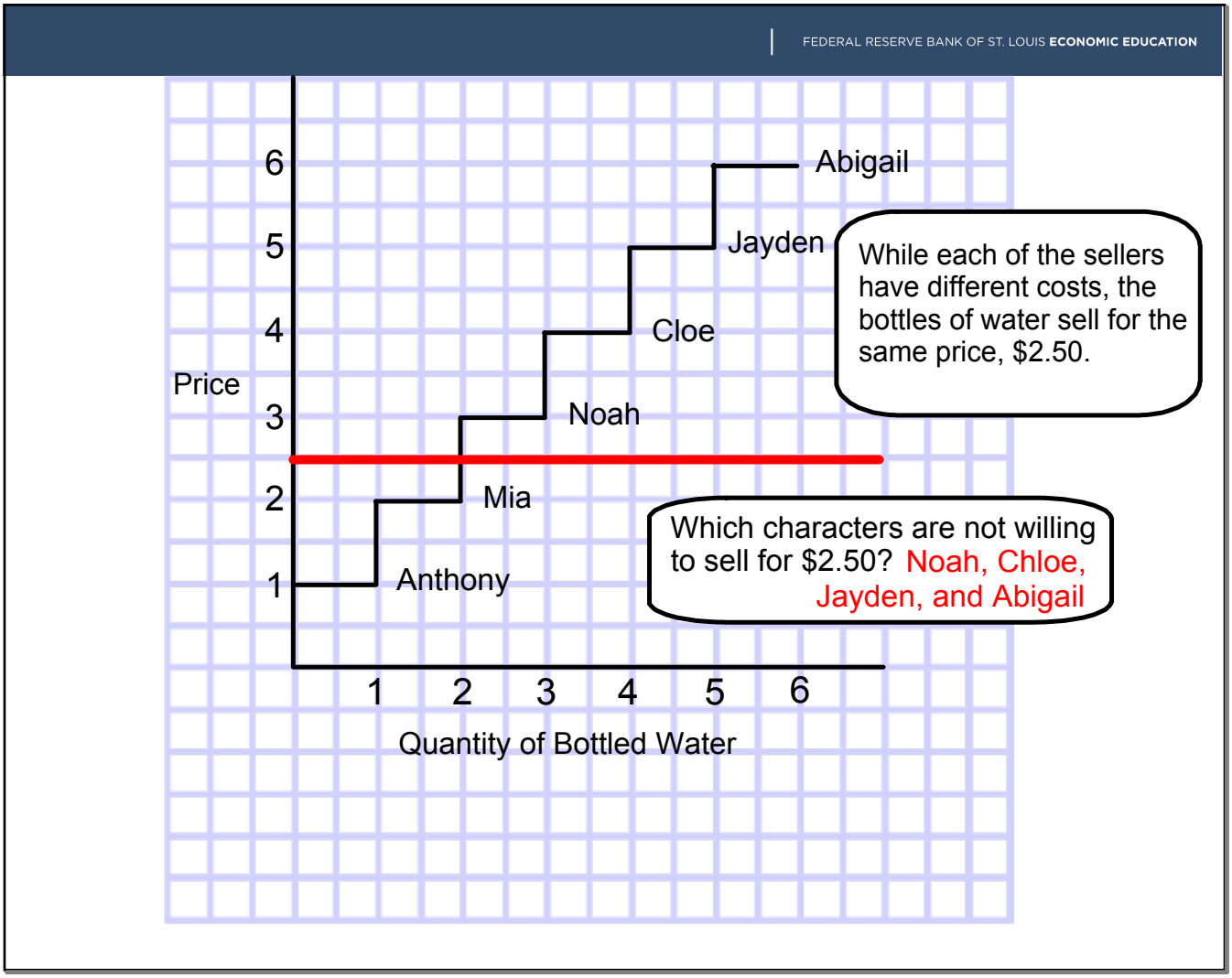

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While each of the sellers have different costs, the bottles of water sell for the same price, $2.50.

Producer surplus is the difference between the price received and the seller's cost.

Calculate the producer surplus for each person.

	cost	price received	producer surplus
Anthony	$1	$2.50	
Mia	$2	$2.50	
Noah	$3	-	
Chloe	$4	-	
Jayden	$5	-	
Abigail	$6	-	

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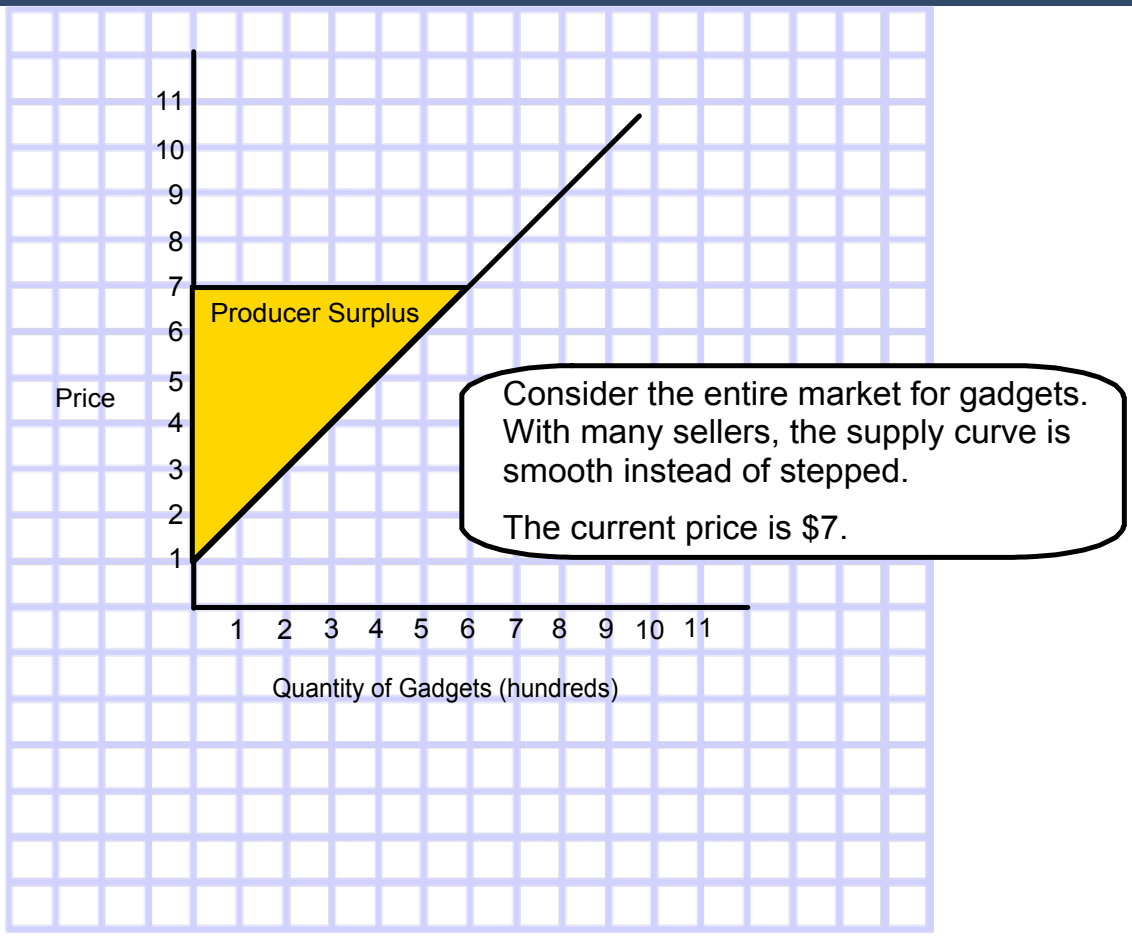

Consider the entire market for gadgets. With many sellers, the supply curve is smooth instead of stepped.

The current price is $7.

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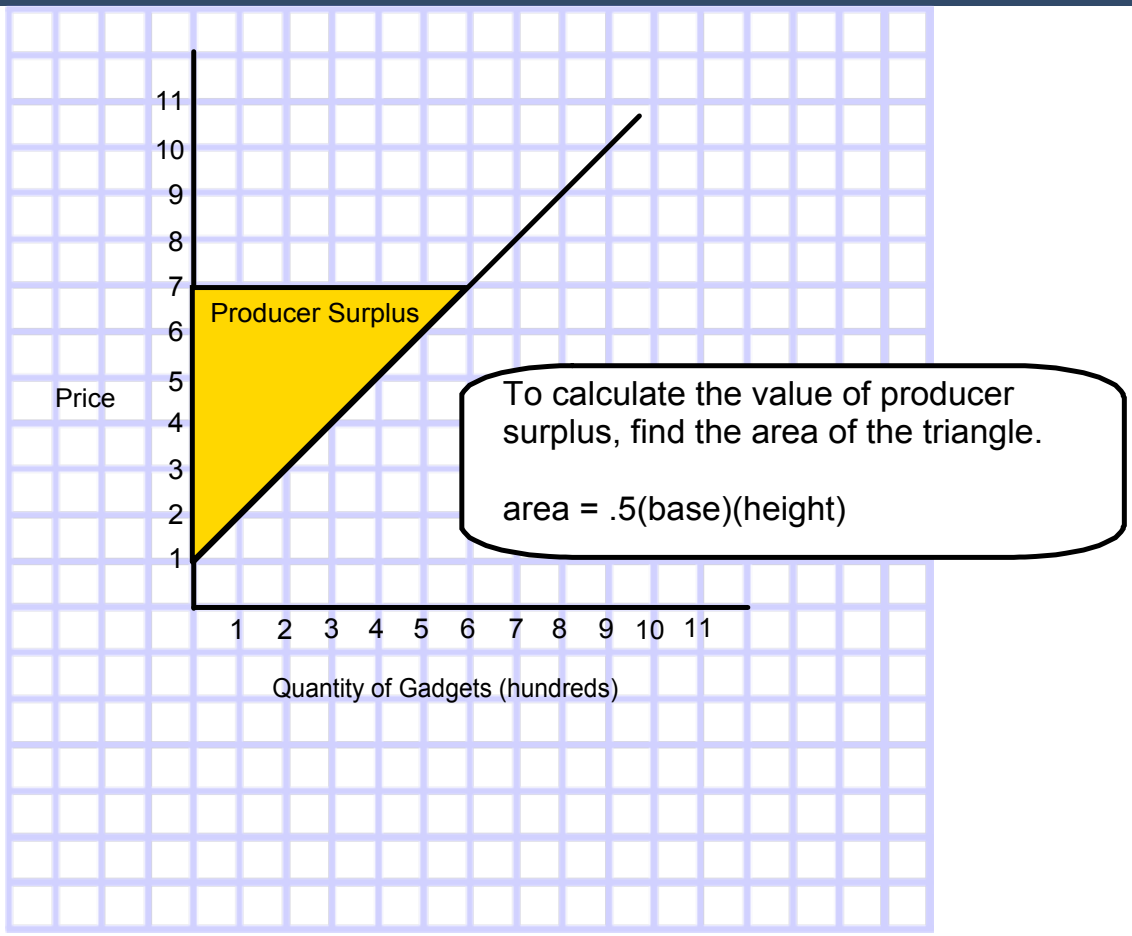

To calculate the value of producer surplus, find the area of the triangle.

area = .5(base)(height)

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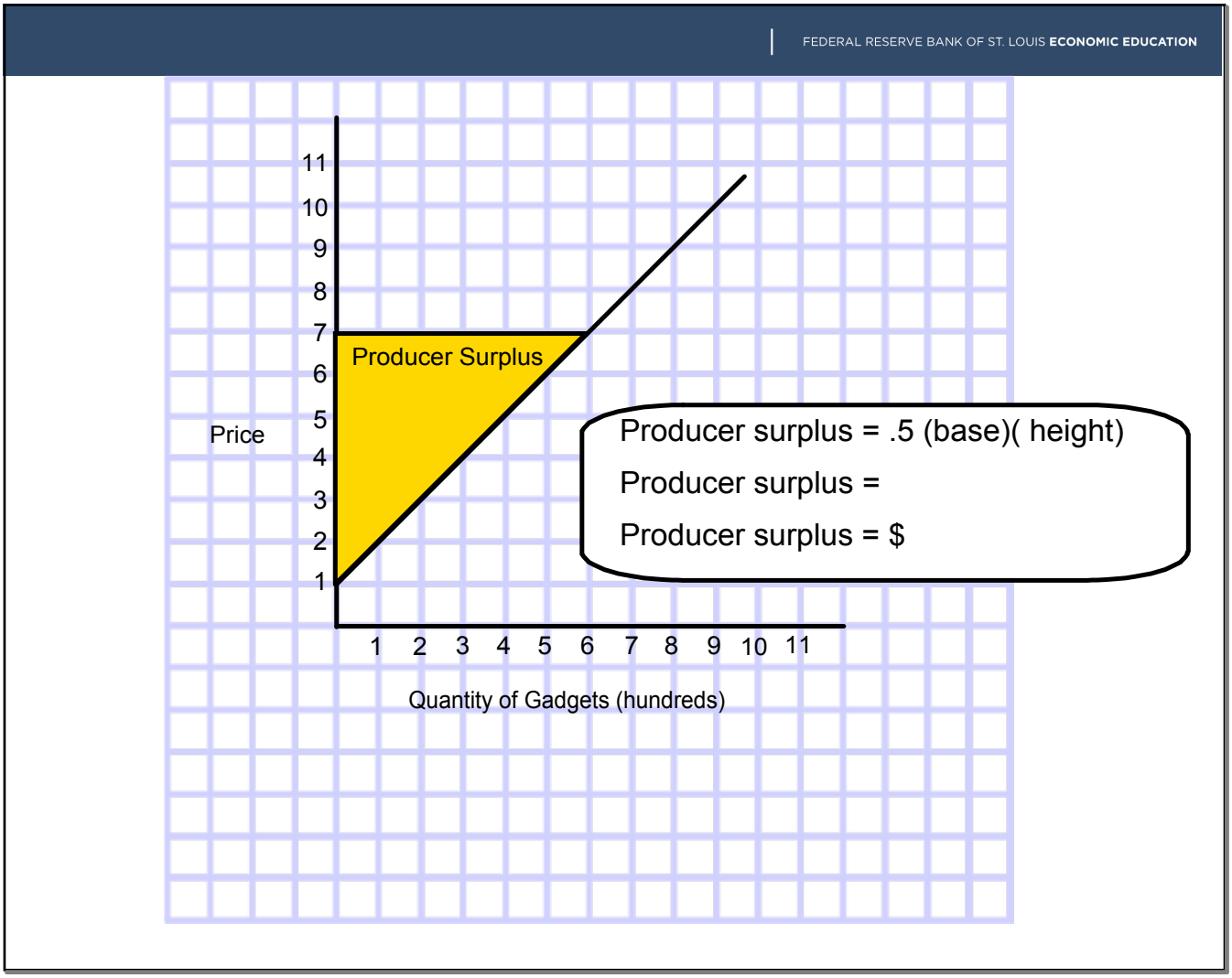

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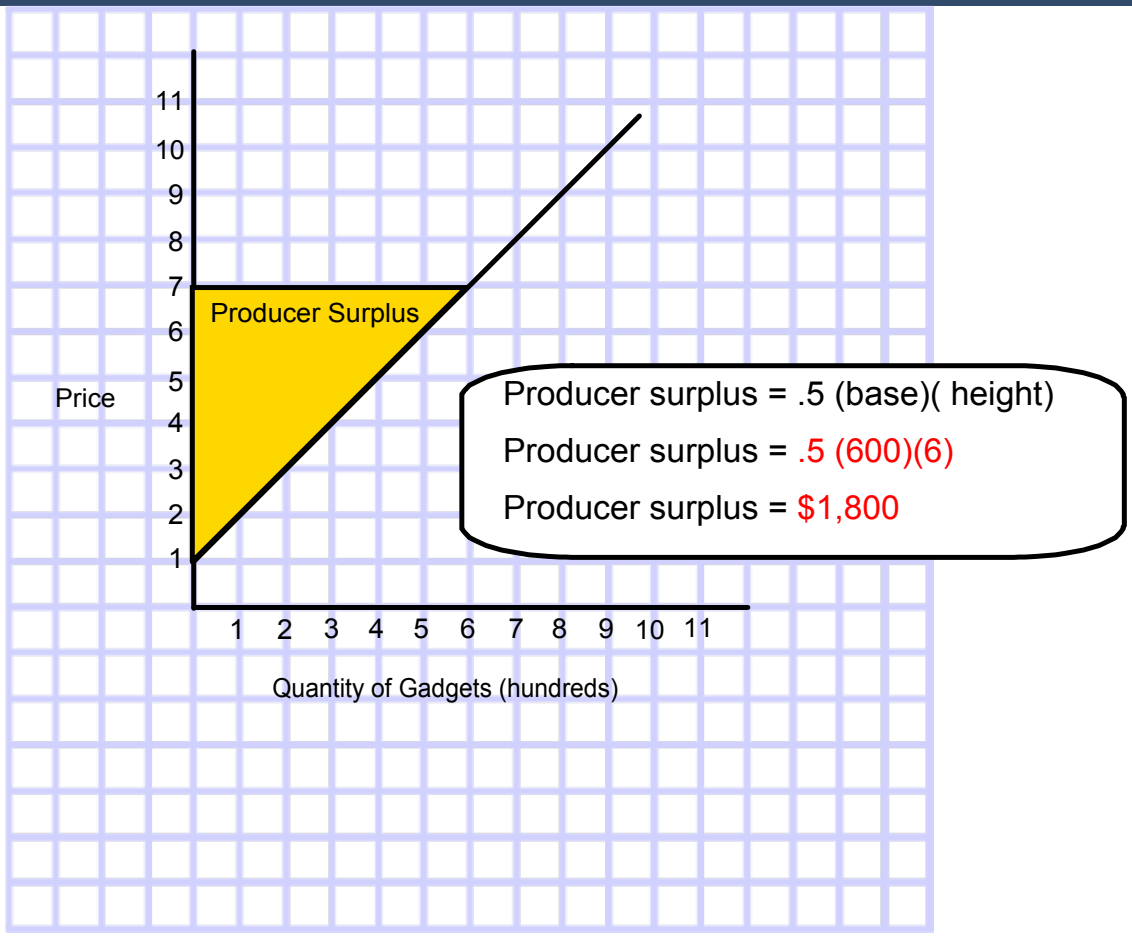

Producer surplus = .5 (base)(height)

Producer surplus = .5 (600)(6)

Producer surplus = $1,800

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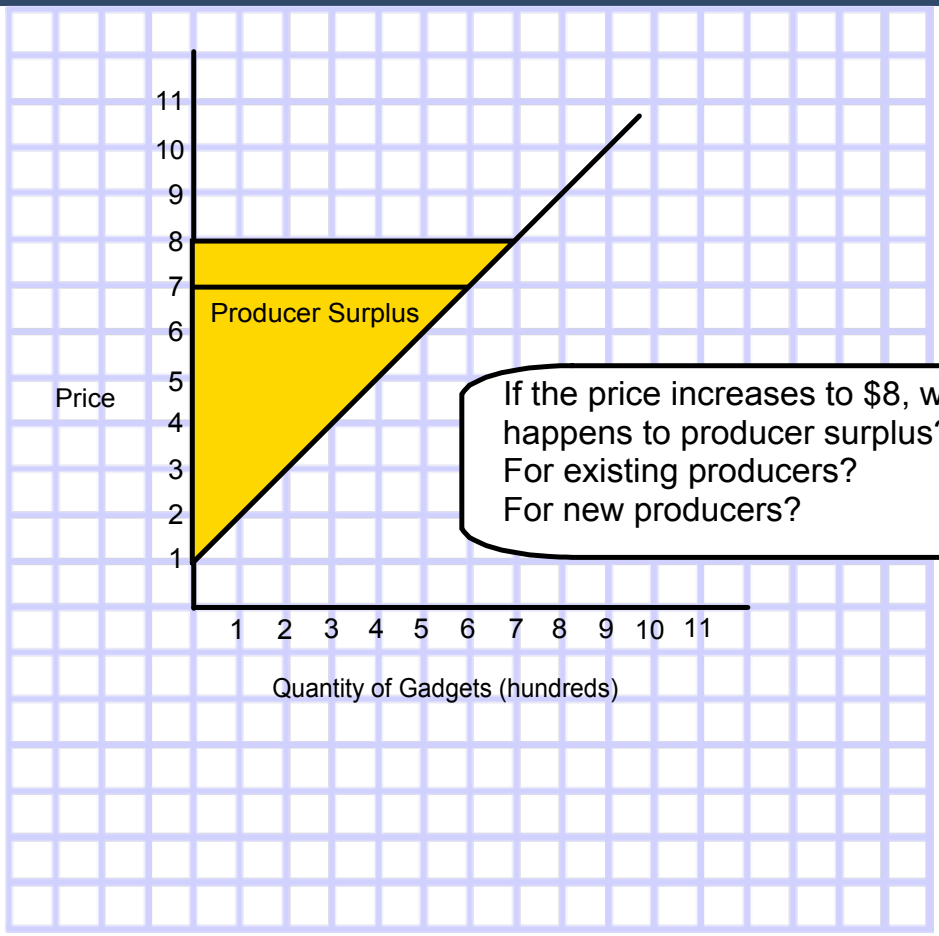

If the price increases to $8, what happens to producer surplus?
For existing producers?
For new producers?

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If the price increases to $8, what happens to producer surplus?
For existing producers? shown in green
For new producers? shown in red

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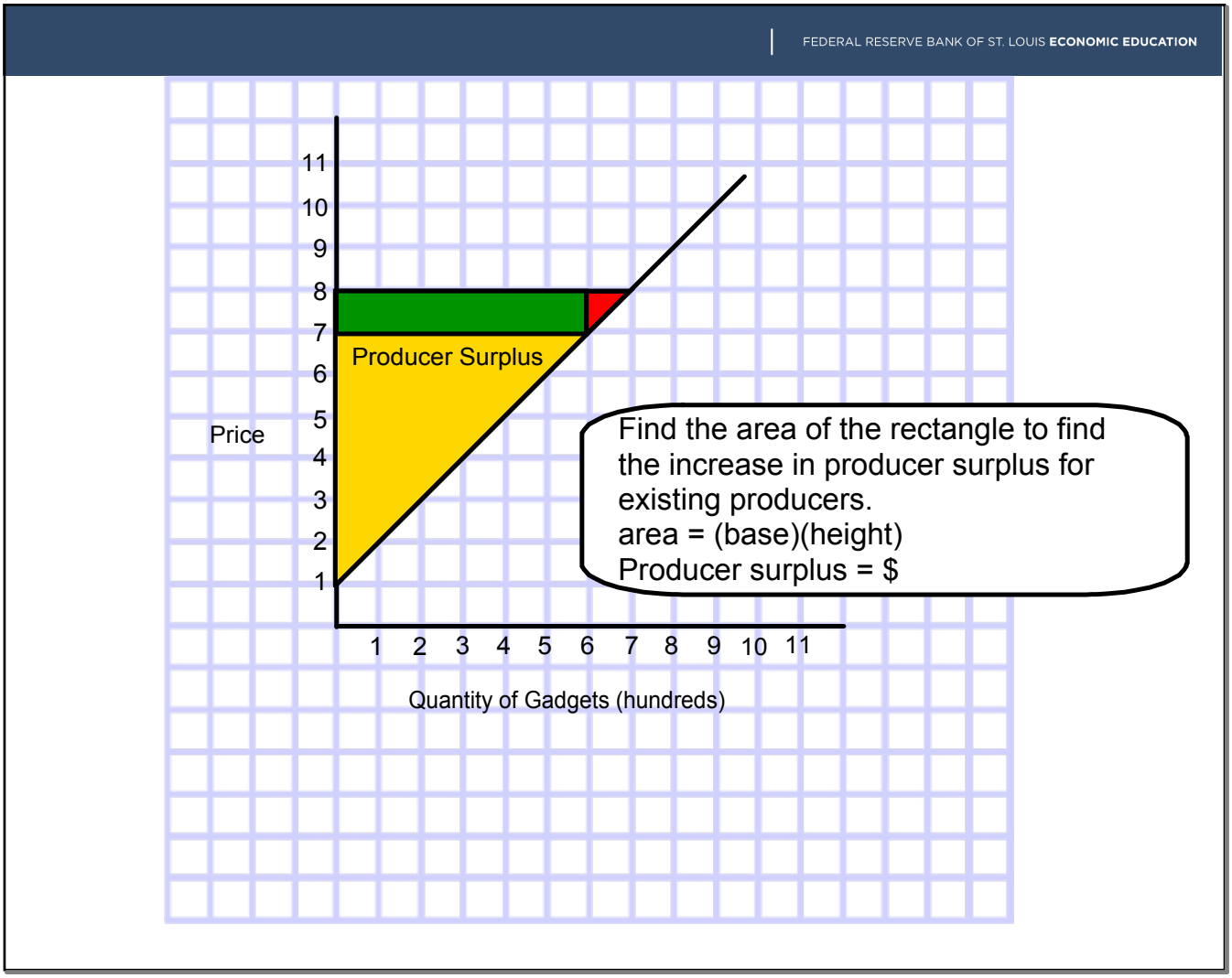

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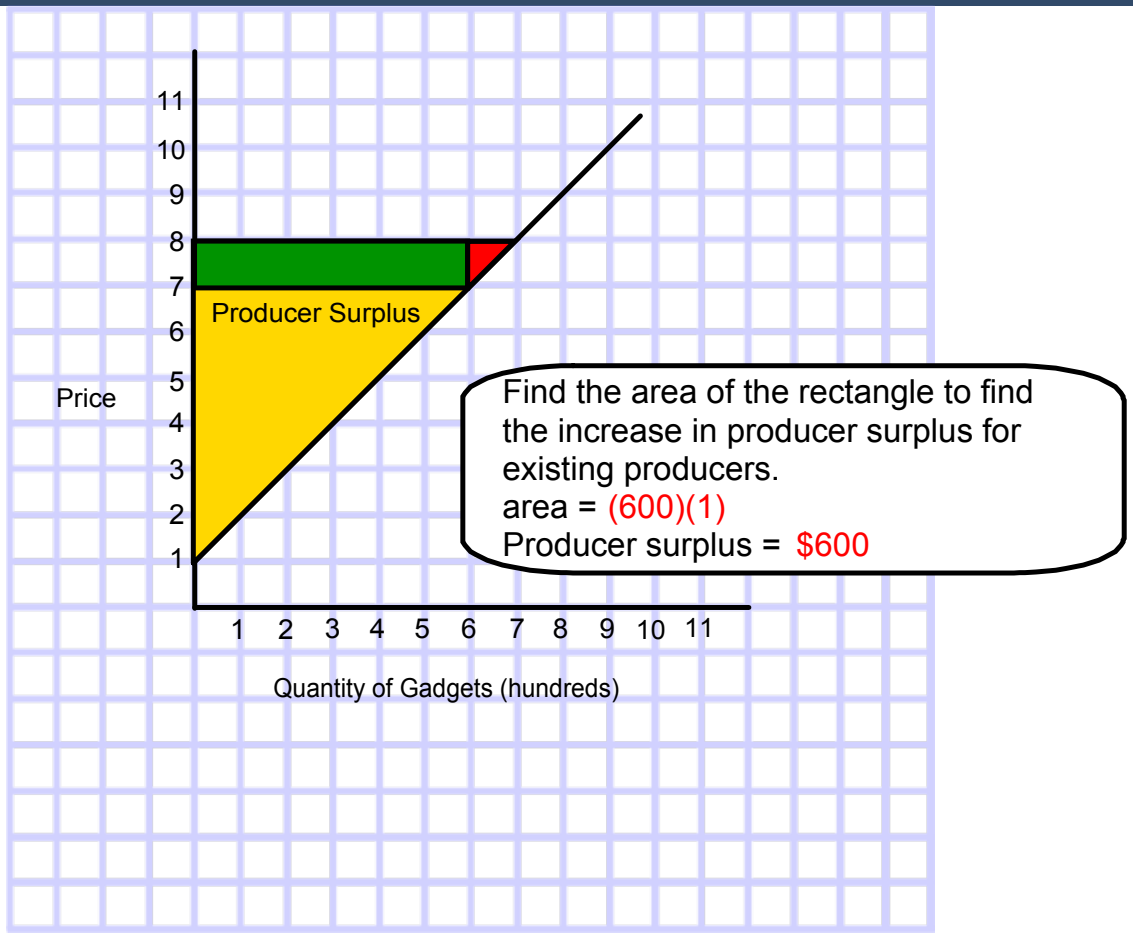

Find the area of the rectangle to find the increase in producer surplus for existing producers.
area = (600)(1)
Producer surplus = $600

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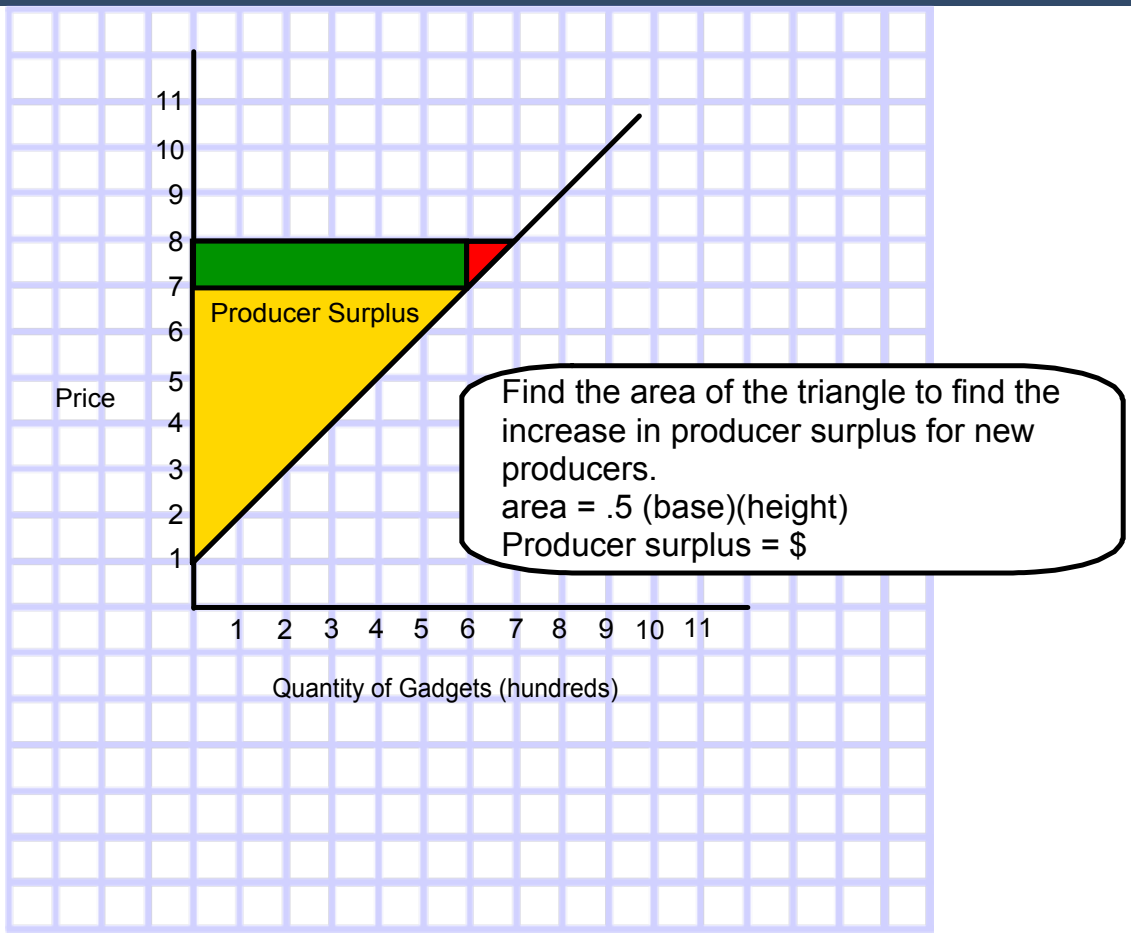

Find the area of the triangle to find the increase in producer surplus for new producers.
area = .5 (base)(height)
Producer surplus = $

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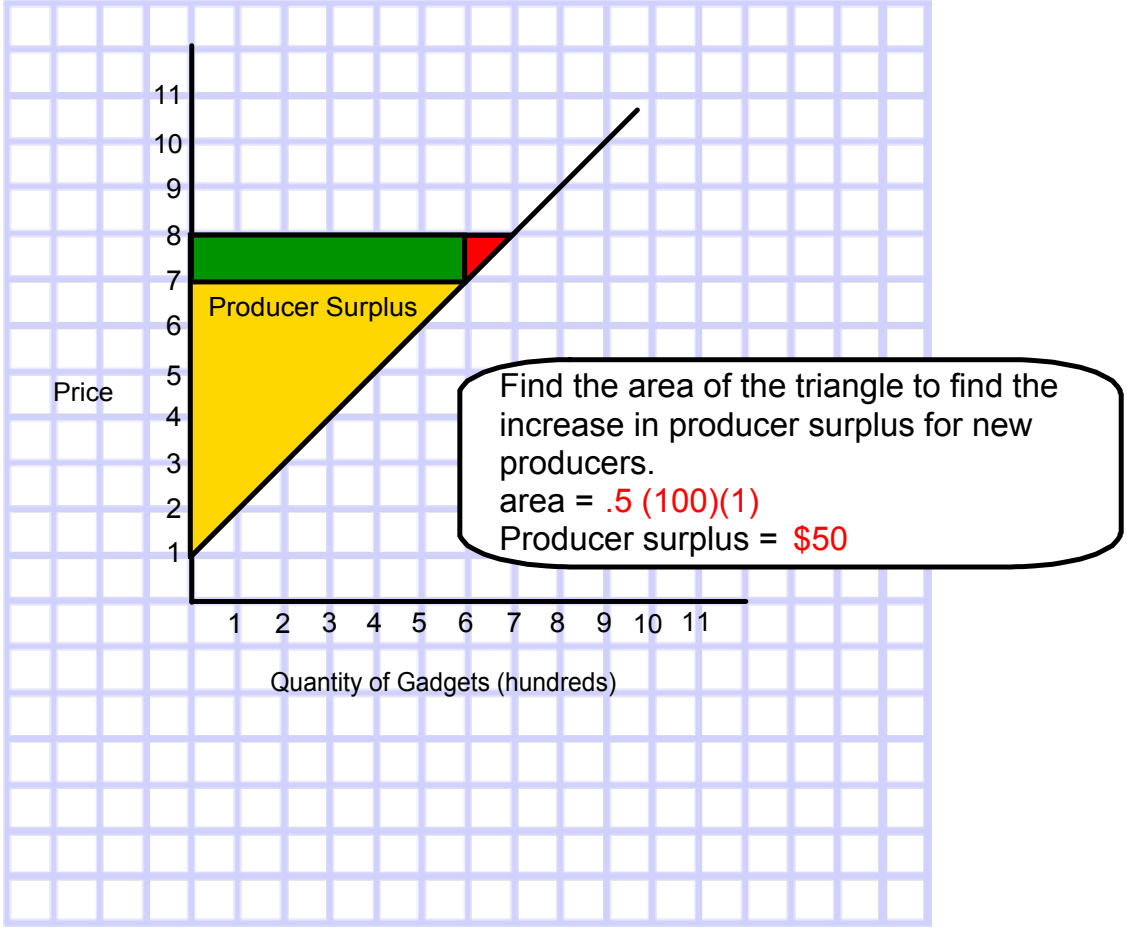

Find the area of the triangle to find the increase in producer surplus for new producers.
area = .5 (100)(1)
Producer surplus = $50

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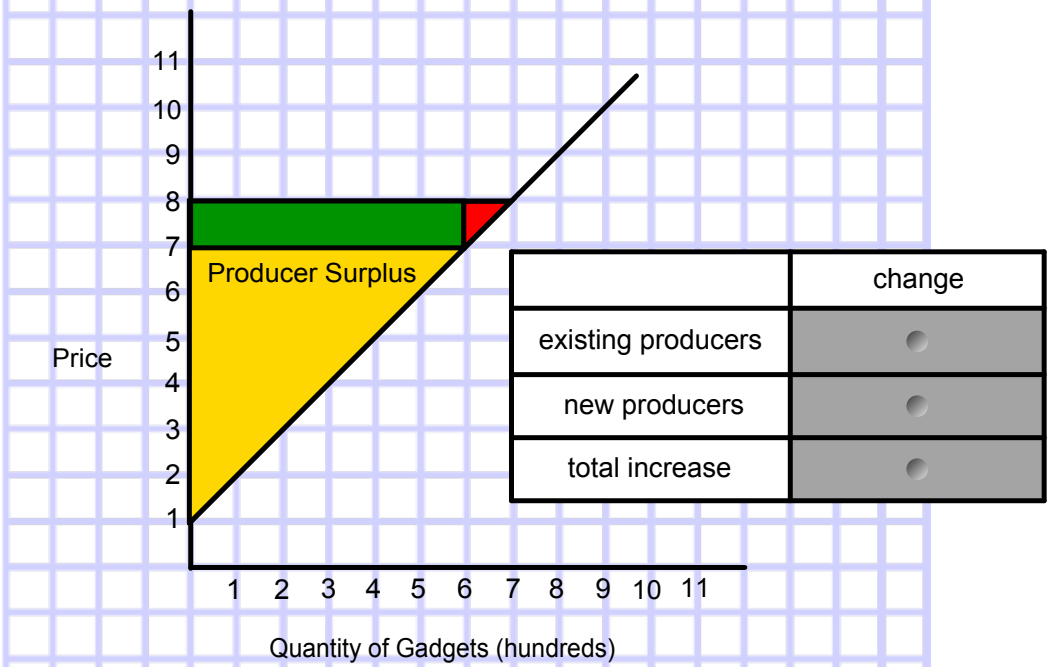

	change
existing producers	
new producers	
total increase	

Use the chart to summarize what happens as a result of a $1 decrease in price.

- For existing producers? For new producers?
- Total increase in producer surplus?

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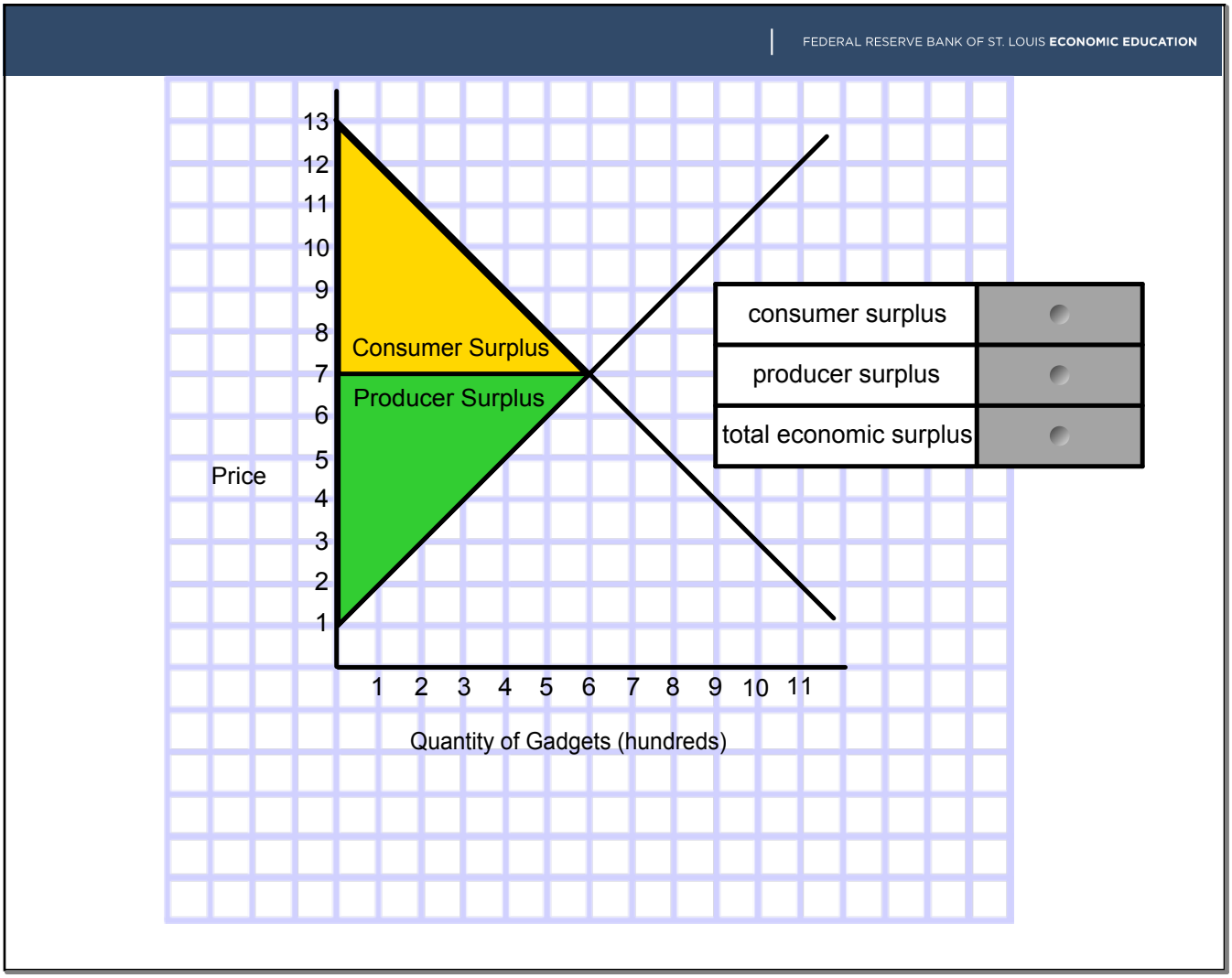

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Conclusions

- Consumer surplus is the difference between what consumers are willing to pay and what they actually pay.
- Consumer surplus can be found in the area above the price and below the demand curve.
- Consumer surplus can be calculated using the formula for the area of a triangle.
- Producer surplus is the difference between the price received and the seller's cost.
- Producer surplus can be found in the area below the price and above the supply curve.
- Producer surplus can be calculated using the formula for the area of a triangle.

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