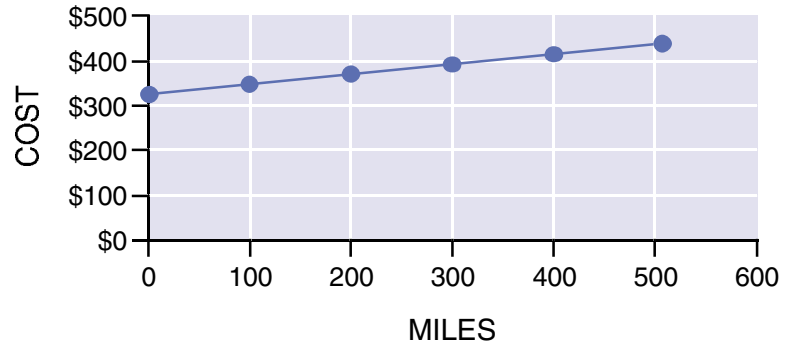
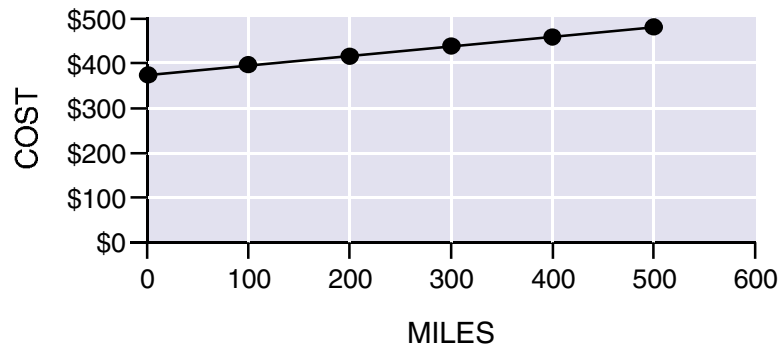


VISUAL 11.1

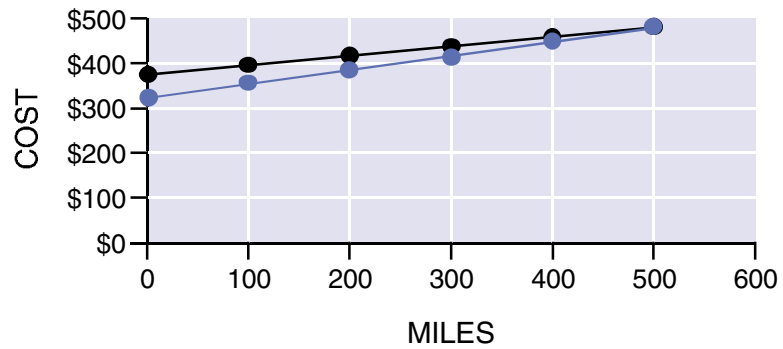
MARTHA's SUV RATES: WARM-UP #1a



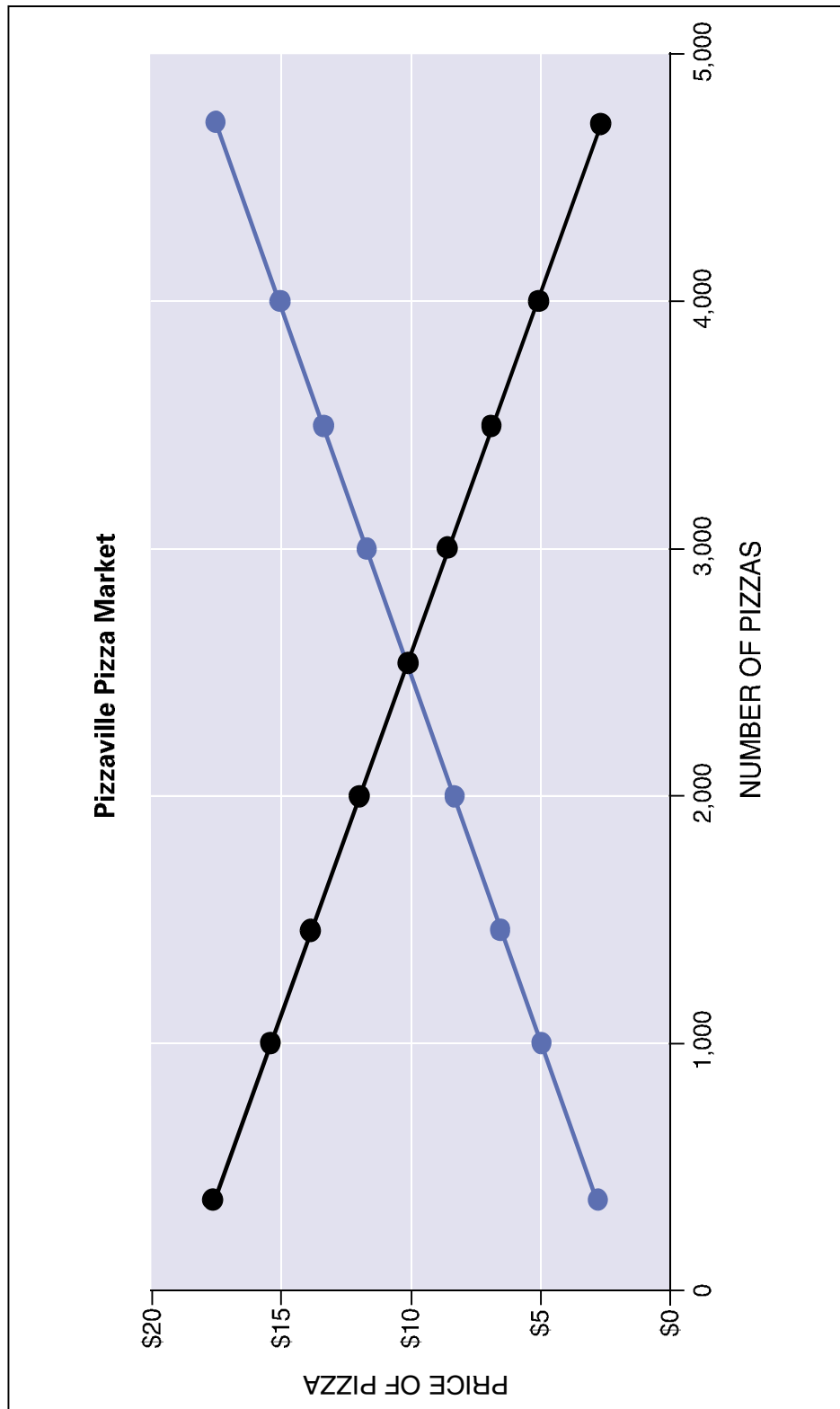
MARTHA's SUV RATES: WARM-UP #1b



MARTHA's SUV RATES: WARM-UP #1b & #1c



VISUAL 11.2



VISUAL 11.3 ▲ Answers to Activity 11.1

Change in Supply

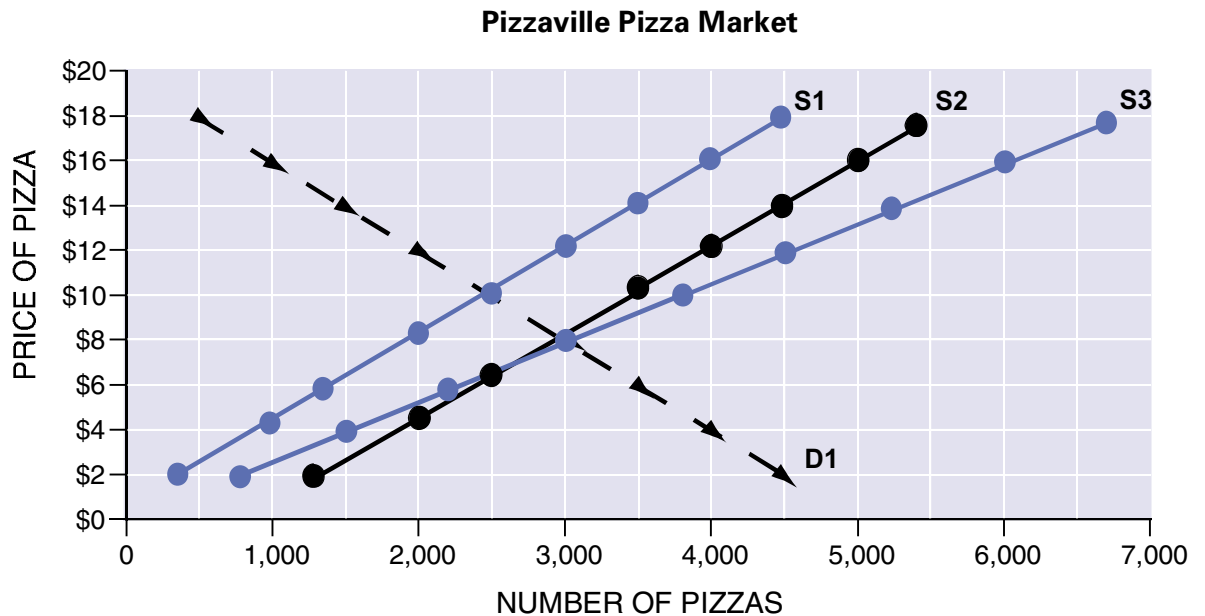
1. At \$10 for a large, two-topping pizza, two pizza makers from the neighboring town figure they can make good money selling pizzas in Pizzaville. To simplify things, we will say that the number of pizzas offered for sale will increase by exactly 1,000 pizzas at each price. Fill in the number of pizzas in Table A below for Supply 2 and plot the new supply line next to the original supply line. Label the new supply line "S2."
2. The equation for the original supply line is $y = 1/250x$. Find the equation for S2. S2 equation: $y = (1/250)(x) - 4$
3. Let's take another look at how the number of pizzas might increase as a result of new sellers entering the Pizzaville market. In this case, the number of pizzas increases by exactly 50% at each price. Fill in the number of pizzas in Table A for Supply 3. Plot the new supply line and label it S3. S3 equation: $y = (1/375)(x)$

Table A

Price of Pizza	Supply 1	Supply 2	Supply 3
\$18	4,500	5,500	6,750
\$16	4,000	5,000	6,000
\$14	3,500	4,500	5,250
\$12	3,000	4,000	4,500
\$10	2,500	3,500	3,750
\$ 8	2,000	3,000	3,000
\$ 6	1,500	2,500	2,250
\$ 4	1,000	2,000	1,500
\$ 2	500	1,500	750

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VISUAL 11.3 (continued)



4. In order to find the price of pizza in Pizzaville you will need to include the buyer's side of the market. Graph the demand line using the following ordered pairs: (4500, \$2), (4000, \$4), (3500, \$6), (3000, \$8), (2500, \$10), (2000, \$12), (1500, \$14), (1000, \$16), (500, \$18). Using S1 and D1, the equilibrium price is \$10 and the equilibrium number of pizzas is 2,500. Using S2 and D1, the equilibrium price is \$8 and the equilibrium number of pizzas is 3,000. Using S3 and D1, the equilibrium price is \$8 and the equilibrium number of pizzas is 3,000.

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VISUAL 11.3 (continued)

Compare and contrast S1, S2, S3. Complete the table below for the three supply lines. Put your answers in the appropriate boxes, then use the sections on the far right to make notes about the similarities and differences between the graphs in terms of their characteristics.

Characteristics	Items to be Compared			Compare and Contrast
	S1	S2	S3	
6. What is the slope of the line?	1/250	1/250	1/375	Similarities All positive Differences S3 changed
7. What is the y-intercept?	0	-4	0	Similarities S1 and S3 stayed the same Differences S2 changed
8. For S2 and S3, what words were used to indicate the amount of change in each supply line? What aspect of the equation changed?		Increased by 1,000 at each price y-intercept	Increased by 50% at each price slope	Similarities Changing some aspect of the number of pizzas changed both equations. Differences Adding 1,000 results in something different than multiplying by 50%.
9. What change took place when the number of pizza sellers in Pizzaville increased?		Supply increased (More pizzas offered for sale.)	Supply increased (More pizzas offered for sale.)	Similarities Both changes increased the number of pizzas offered for sale. Differences Increased by different amounts.

10. How did increasing the number of sellers change the equilibrium price of pizza? (The equilibrium price decreased.)
11. Write a summary statement of what you have learned about the three supply lines in the Pizzaville pizza market.

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VISUAL 11.4 ▲ Answers to Activity 11.2

Change in Demand

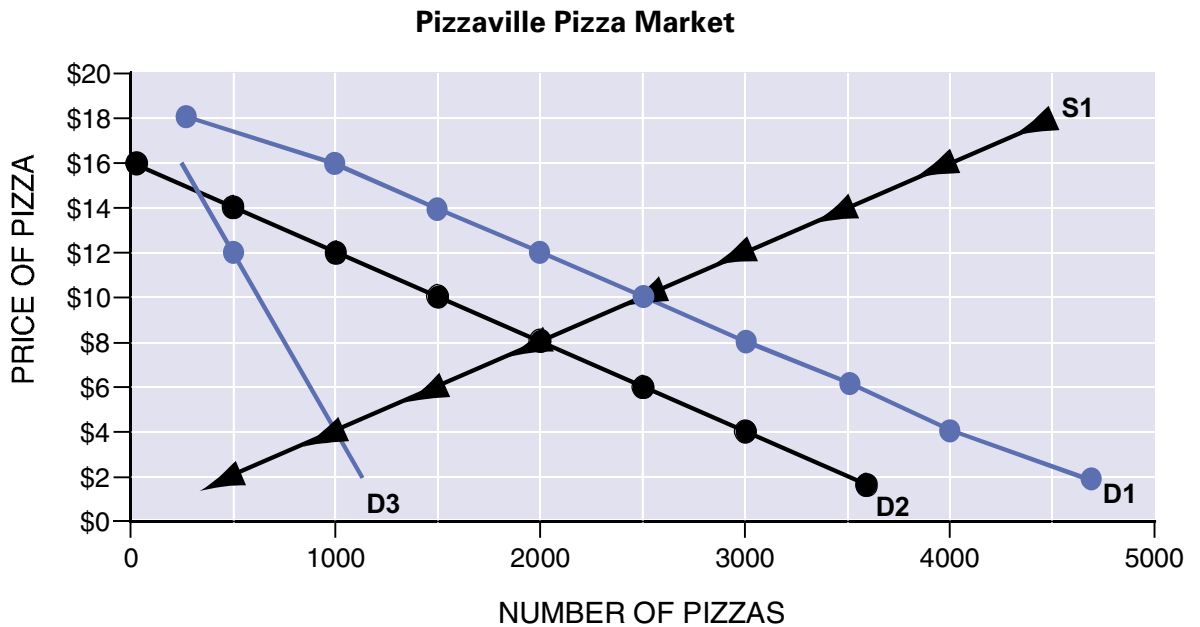
1. The city of Pizzaville decided to promote healthy eating for its residents by sponsoring a weight-loss program that offered awards to anyone who could lose ten pounds over the next three months. The effect of this program has caused some changes in the number of pizzas that people are willing to buy in Pizzaville. To keep things simple, we will say that the number of pizzas that people will buy will decrease by exactly 1,000 pizzas at each price. Fill in the number of pizzas in Table B below for Demand 2, and plot the new demand line next to the original demand line. Label the new demand "D2."
2. The equation for the original demand line is $y = 20 - (1/250)(x)$. Find the equation for D2. The D2 equation is: $y = (-1/250)(x) + 16$.
3. Let's take another look at how the number of pizzas might decrease as a result of people buying fewer pizzas. In this case, the number of pizzas decreases by exactly 75% at each price. Fill in the number of pizzas in Table B for Demand 3. Plot the new demand line and label it D3. D3 equation is: $y = (-2/125)(x) + 20$.

Table B

Price of Pizza	Demand 1	Demand 2	Demand 3
\$18	500	-500	125
\$16	1,000	0	250
\$14	1,500	500	375
\$12	2,000	1,000	500
\$10	2,500	1,500	625
\$ 8	3,000	2,000	750
\$ 6	3,500	2,500	875
\$ 4	4,000	3,000	1,000
\$ 2	4,500	3,500	1,125

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VISUAL 11.4 (continued)



4. In order to find the price of pizza in Pizzaville you will need to include the seller's side of the market. Graph the supply line using the following ordered pairs: (500, \$2), (1000, \$4), (1500, \$6), (2000, \$8), (2500, \$10), (3000, \$12), (3500, \$14), (4000, \$16), (4500, \$18). Using S1 and D1, the equilibrium price is \$10 and the equilibrium number of pizzas is 2,500. Using S1 and D2, the equilibrium price is \$8 and the equilibrium number of pizzas is 2,000. Using S1 and D3, the equilibrium price is \$4 and the equilibrium number of pizzas is 1,000.

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VISUAL 11.4 (continued)

Compare and contrast D1, D2, D3. Complete questions 1-4 in the table below for the three supply lines from questions 4 and 5. Put your answers in the appropriate boxes; then use the sections on the far right to make notes about the similarities and differences between the graphs in terms of their characteristics.

Characteristics	Items to be Compared			Compare and Contrast
	D1	D2	D3	
5. What is the slope of the line?	-1/250	-1/250	-2/125	Similarities All negative Differences D3 changed.
6. What is the y-intercept?	20	16	20	Similarities All positive D3 stayed the same. Differences D2 changed.
7. For S2 and S3, what words were used to indicate the amount of change in each supply line? What aspect of the equation changed?		Decreased by exactly 1,000 pizzas at each price y-intercept	Decreased by 75% at each price slope	Similarities Changing some aspect of the number of pizzas changed both equations. Differences Subtracting 1,000 results in something different than decreasing by 75%.
8. What change took place when people were less willing to buy less pizza in order to lose weight?				Similarities Demand dropped for D2 and D3. Differences The decrease in pizzas people were willing to purchase differed between D2 and D3.

9. How did decreasing the number of pizzas people wanted to buy, change the equilibrium price of pizza? (It decreased.)
10. Write a summary statement of what you have learned about the three demand lines in the Pizzaville pizza market.

VISUAL 11.5

