**3.3 skills Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Determine the rate of change for each situation.**

**1.** Lashawna is making jewelry to sell at a craft fair. On Monday, she makes 12 bracelets. On Tuesday, she works an additional 2.5 hours and has a total of 22 bracelets. What is the unit rate of the time it takes her to make each bracelet?

**2.** Nina and her friends are going to the downtown rib festival. The festival organizers expect 10,000 people to attend the four-day festival. At the end of the festival the organizers say that they have exceeded their expected attendance by 2000 people. What was the average number of people to attend the festival per day?

**3.** Rosa is ordering a submarine sandwich from the corner deli. The deli charges $6.25 for a 7-inch sub. Some additional toppings cost extra. Rosa’s sandwich with two extra toppings costs $7.75. What is the cost per additional topping?

**4.** Aiko spends 2.5 hours baking croissants for a community center bake sale. Aiko bakes the 90 croissants in 5 batches. What is the unit rate of the number of batches baked per hour?

**5.** Nelson is selling his photographs at an art festival. The festival is open for 6 hours each day for 3 days. At the conclusion of the festival, Nelson has sold 54 photographs. What is the unit rate of the number of photographs sold per hour?

**6.** Clayton wants to purchase tickets for the rides at a carnival. He can choose to purchase tickets individually or he can purchase a ticket package. The package includes 25 tickets for $18.75. What is the cost per ticket if he purchases the package?

**7.** Carmen is selling pies at the cherry festival to raise money for her local volunteer fire department. She sells 85 pies for $12 each. The supplies to make the pies cost Carmen $340. What is the unit rate of the profit made for each pie?

**8.** Tameca is planning a hiking trip. The trail she would like to follow is 7.5 miles long. She plans to start her hike at 10:00 AM. She hopes to reach the end of the trail at 3:00 PM. What is the unit rate of the number of miles per hour that Tameca plans to hike?

**9.** Jamal is shopping with a gift card he received for his birthday. After he purchases two T-shirts the gift card balance has dropped from $50 to $20.02. What is the unit rate of the cost per T-shirt?

**10.** Olivia is printing photos for a scrapbook project. She prints 150 photos in 1 hour and 15 minutes. What is the unit rate of the number of minutes it takes to print each photo?

**11.** Franco is traveling to a vacation destination 715 miles from home. On the first day of his trip he travels 390 miles in 6 hours. On the second day of his trip he leaves at 8:00 AM and arrives at his destination at 1:00 PM. What is the unit rate of the total number of miles per hour traveled? Convert the information to coordinate points and use the formula ** to answer the question.

**12.** Rakesha loves reading and is participating in a read-a-thon to raise money for a charity. She plans to read 15 books during the 90-day read-a-thon. During the first 30 days she reads 7 books. What is the unit rate of the number of days she has to read each book to meet her goal? Convert the information to coordinate points and use the formula ** to answer the question.

**3.3**