

LESSON

6-4

Problem Solving***Solving Special Systems***

Write the correct answer.

- Tyra and Charmian are training for a bike race. Tyra has logged 256 miles so far and rides 48 miles per week. Charmian has logged 125 miles so far and rides 48 miles per week. If these rates continue, will Tyra's distance ever equal Charmian's distance? Explain.

- Metroplexpress and Local Express are courier companies. Metroplexpress charges \$15 to pick up a package and \$0.50 per mile. Local Express charges \$10 to pick up a package and \$0.55 per mile. Classify this system and find its solution, if any.

- The Singhs start savings accounts for their twin boys. The accounts earn 5% annual interest. The initial deposit in each account is \$200. Classify this system and find its solution, if any.

- Frank earns \$8 per hour. Madison earns \$7.50 per hour. Frank started working after Madison had already earned \$300. If these rates continue, will Frank's earnings ever equal Madison's earnings? If so, when?

Select the best answer.

- A studio apartment at The Oaks costs \$400 per month plus a \$350 deposit. A studio apartment at Crossroads costs \$400 per month plus a \$300 deposit. How many solutions does this system have?
 - no solutions
 - 1 solution
 - 2 solutions
 - an infinite number of solutions
- A tank filled with 75 liters of water loses 0.5 liter of water per hour. A tank filled with 50 liters of water loses 0.1 liter of water per hour. How would this system be classified?
 - inconsistent
 - dependent
 - consistent and independent
 - consistent and dependent
- Jane and Gary are both landscape designers. Jane charges \$75 for a consultation plus \$25 per hour. Gary charges \$50 for a consultation plus \$30 per hour. For how many hours will Jane's charges equal Gary's charges?
 - never
 - after 2 hours
 - after 5 hours
 - always
- Simon is 3 years older than Renata. Five years ago, Renata was half as old as Simon is now. How old are Simon and Renata now?
 - Simon is 13 and Renata is 10.
 - Simon is 15 and Renata is 10.
 - Simon is 16 and Renata is 8.
 - Simon is 16 and Renata is 13.