Name _____ Date _____

Grade 5/Unit 8 Post Test Patterns, Functions, and Change

Choose the correct answer.

Sophie and Tom are training to run in a race. They each run several miles every day. So far, Sophie has run 4 miles and Tom has run 16 miles.

Sophie decides to run 7 miles every day until the race. Tom decides to run 4 miles every day until the race.

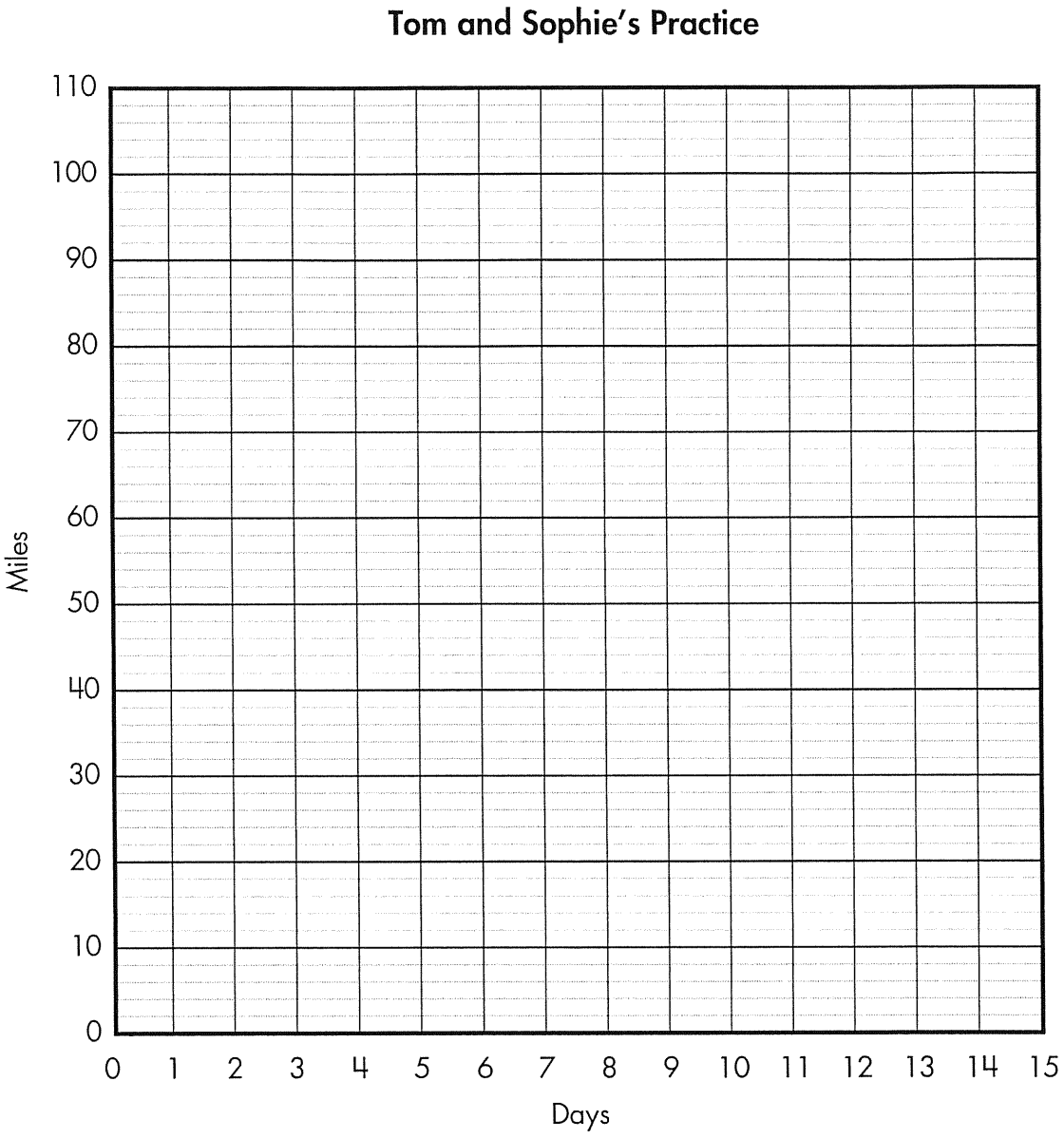
1. Fill in the table to show how many miles. Sophie and Tom will run in the next 10 days as they practice for the race.

Day	Sophie	Tom
Miles so far	4	16
1	11	20
2		
3		
4		
5		
6		
7		
8		
9		
10		

2. Is there ever a time when Sophie and Tom have the same total number of miles? If so, why does this happen?

3. Write an arithmetic expression using n to find the total number of miles Sophie runs after any number of days.

4. Draw a graph for Sophie and a graph for Tom.



Choose the correct answer.

5. Cecilia is making rows of tiles with 8 tiles in each row. What is the rule for finding the total number of tiles in n rows?

A. $n + 8$ **B.** $n \times 2$ **C.** $n \times 8$ **D.** $n \times 6$

For Problems 6–8 use the table at the right. The table shows the number of pennies in Felix's and Tavon's Penny Jars.

Round (n)	Total Number of Pennies	
	Felix	Tavon
Start with	10	2
1	14	7
2	18	12
3	22	17
4	26	22
5	30	27

6. Felix started with 10 pennies and added 4 pennies in each round. How many pennies will there be in Felix's Penny Jar after 20 rounds?

A. 80 **C.** 200

B. 90 **D.** 204

7. Tavon started with 2 pennies and added 5 pennies in each round. How many pennies will there be in Tavon's Penny Jar after 20 rounds?

A. 127 **B.** 102 **C.** 100 **D.** 45

8. In which round will Tavon's jar catch up to Felix's jar?

A. Round 3 **B.** Round 6 **C.** Round 7 **D.** Round 8