## Unit 3 Test

## You may use calculators, multiplication tables, or square-inch tiles to solve the following problems.

**1.** Tom made a rectangle with 16 tiles. If there were 4 rows, how many tiles were in each row? Sketch a picture of this rectangle.

2. List all the factors of 16. Show how you found your answer.

**3.** Is 16 a multiple of 4? Show or tell how you know.

4. Is 16 a multiple of 5? Show or tell how you know.

**6.** Is 16 a square number? Show or tell how you know.

7. Is 17 a prime number? Tell how you know.

8. Design a box for the TIMS Candy Company that will hold 36 pieces of candy and that has more than two layers. Tell how many layers are in your box. Also, tell how many pieces of candy are in each layer. Each layer must hold the same number of pieces.

**9.** Use a factor tree to find the prime factors of 60. Write 60 as a product of its prime factors.

- **10.** Find the number of squares in the rectangle below using the break-apart method.
  - Break the rectangle into parts to make it easier to multiply. Write number sentences to show the number of squares in each part.
  - Write a number sentence to show how you found the total number of squares in the large rectangle.

Unit 3 Test Feedback Box	Expectation	Check In	Comments
Use arrays to solve multiplication and division problems. [Q# 1, 8, 10]	E1		
Decide if one number is a multiple of another. [Q# 3, 4, 11]	E2		
Find the factors of a number. [Q# 2]	E3		
Decide if a number is prime. [Q# 5, 7, 11]	E4		
Decide if a number is a square number. [Q# 6, 11]	E5		
Find the prime factorization of a number. [Q# 9]	E6		
Use break-apart products to solve multiplication problems with larger numbers. [Q# 10]	Е9		

Name -

**11.** Solve the following number riddle. Write a paragraph about how you found your answer. Use Math Practices Expectation 5 to help organize your thinking.

I am a multiple of 3. 2 is not one of my factors. I am not prime and I am not square. I am less than 20. What number am I?

Unit 3 Test Q#11 Feedback Box	Yes	Yes, but	No, but	No
MPE5. Show my work. I show or tell how I arrived at my answer so someone else can understand my thinking.				