Name _____ Date _____

1. Circle each expression that is not equivalent to the expression in **bold**.

   a. **37 × 19**

   37 nineteens | (30 × 19) – (7 × 29) | 37 × (20 – 1) | (40 – 2) × 19

   b. **26 × 35**

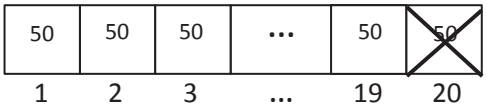
   35 twenty-sixes | (26 + 30) × (26 + 5) | (26 × 30) + (26 × 5) | 35 × (20 + 60)

   c. **34 × 89**

   34 × (80 + 9) | (34 × 8) + (34 × 9) | 34 × (90 – 1) | 89 thirty-fours

2. Solve using mental math. Draw a tape diagram and fill in the blanks to show your thinking. The first one is partially done for you.

a. 19 × 50 = _____ fifties



Think: 20 fifties – 1 fifty

= (_____ × 50) – (_____ × 50)

= _____ – _____

= _____

b. 11 × 26 = _____ twenty-sixes

Think: _____ twenty-sixes + _____ twenty-six

= (_____ × 26) + (_____ × 26)

= _____ + _____

= _____

c. 49 × 12 = _____ twelves Think: _____ twelves – 1 twelve = (_____ × 12) – (_____ × 12) = _____ – _____ = _____	d. 12 × 25 = _____ twenty-fives Think: _____ twenty-fives + _____ twenty-fives = (_____ × 25) + (_____ × 25) = _____ + _____ = _____

3. Define the unit in word form and complete the sequence of problems as was done in the lesson.

a. 29 × 12 = 29 _____ Think: 30 _____ – 1 _____ = (30 × _____) – (1 × _____) = _____ – _____ = _____	b. 11 × 31 = 31 _____ Think: 30 _____ + 1 _____ = (30 × _____) + (1 × _____) = _____ + _____ = _____

c. 19 × 11 = 19 _____ Think: 20 _____ – 1 _____ = (20 × _____) – (1 × _____) = _____ – _____ = _____	d. 50 × 13 = 13 _____ Think: 10 _____ + 3 _____ = (10 × _____) + (3 × _____) = _____ + _____ = _____

4. How can 12 × 50 help you find 12 × 49?

5. Solve mentally.

   a. 16 × 99 = _____

   b. 20 × 101 = _____

6. Joy is helping her father to build a rectangular deck that measures 14 ft by 19 ft. Find the area of the deck using a mental strategy. Explain your thinking.

7. The Lason School turns 101 years old in June. In order to celebrate, they ask each of the 23 classes to collect 101 items and make a collage. How many total items will be in the collage? Use mental math to solve. Explain your thinking.