

Multiplication properties and strategies

name: _____

class time: _____

1. a. Explain, using an appropriate, well labelled diagram and sentences, why it works and makes sense that $3 \times 7 = 7 \times 3$

b. What is the name of this property

2. a. Explain, using an appropriate, well labelled diagram and sentences, why it makes sense that $3 \times 7 = 3 \times 5 + 3 \times 2$

b. What is the name of this property

For problems 3 and 4

- a. Draw a proportional array on graph paper
- b. Solve the problem by the expanded multiplication algorithm
- c. Solve the problem by the standard multiplication algorithm
- d. Solve the problem by the lattice multiplication algorithm
- e. Label or color code all of a-d so that all 3 representations are connected.

3. 24×31

4. 16×27