Partial credit is based on work shown!

4pts

1. Illustrate that $4 \times 2 = 8$ using the following two different approaches.

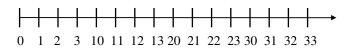
15

a. Set model

b. Number-line model

2pts

2. Use this base four number-line (or use "thinking strategies") to do the following problems:



b.
$$2_{four} \times 3_{four} = _____four$$

4pts

3. Give the name of the property of whole numbers that each of the following illustrates.

a.
$$5 \times 1 = 5$$

b.
$$3(8+7) = 3(8) + 3(7)$$

c.
$$(9 \times 2) \times 7 = 9 \times (2 \times 7)$$

d.
$$5 + (4 + 3) = 5 + (3 + 4)$$

$$. \quad 5 + (4+3) = 5 + (3+4)$$

3pts

4. Is this set {0, 5, 10, 15, 20, 25, 30, ...} of multiples of five closed for division? Explain.

2pts

5. Rewrite with a single exponent. Show your steps to illustrate the rules of exponents that you used.

$$3^5 \cdot 9^3 =$$