Section 1.6 Homework

- 1. For each of the following, **draw** the blocks and show the trading.
 - **a.** Show how you would add $214_5 + 24_5$ in base 5 using base 5 blocks and trading.
 - **b.** Show how you would add $114_5 + 44_5$ in base 5 using base 5 blocks and trading.
 - c. Show how you would subtract $214_5 44_5$ in base 5 using base 5 blocks and trading.
- 2. Add each of the following. You can use blocks if you like, but you do not have to:

a) 245 ₈	b) 214 ₆	c) 1001_2	d) 298 ₁₂
+ 1738	$+ 543_6$	$+ 1011_2$	$+ 115_{12}$

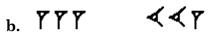
3. Subtract each of the following:					
a) 273 ₈	b) 101_2	c) 214_{12}	d) 514 ₆ $- \underline{143}_6$		
$- \frac{155}{8}$	-11_{2}	- <u>193</u> ₁₂	-1406		

- 4. **Converting Practice.** Check your addition in #2c by converting each binary number into base 10, then adding them and converting the answer back into base 2. That is:
 - **a.** Convert 1001_2 into base 10.
 - **b.** Convert 1011_2 into base 10.

YY

- c. In regular base 10 addition, add your two answers to parts a and b.
- d. Convert your answer into base 2.
- **e.** Is your result the same as when you added them in problem 2, above? (IT should be!)
- **5. Review Babylonian.** Convert the following numbers into Hindu Arabic (our system). (The space indicates a new place value.)

_{a.} **∢**፻፻



- 6. Name at least three numbers this could be, depending on whether there was an unwritten zero in between the two sets of symbols, or no zero, or a zero after the two symbols.
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- 7. Convert the following numbers into Babylonian: a. 204 b. 185
- 8. Review Converting Bases

 a. Convert 85 into base 6.
 c. Convert 1445 into base 12.
 - b. Convert 134_{12} into base 10.