

DIVISIBILITY RULE FOR 4

In class we discussed the following rule for determining whether or not a number is divisible by 4: A number is divisible by 4 if the number represented by the last two digits is divisible by 4. Based on the class discussion about why this rule works, answer the following.

1. How convinced are you that all numbers that fit the rule will be divisible by 4?
2. Describe your understanding of the line of reasoning suggested in class for why the divisibility rule for 4 works in general. Indicate the aspects of this argument that you find convincing, and those for which you still have questions.

RENAMING NUMBERS

There are lots of ways to rename numbers. For example, the quantity 6 can be renamed as: $5 + 1$, $10 - 4$, etc.

3. Using whole numbers, create 10 different ways to rename the quantity 1476. Make these renamings as different as you can.
 - a. For 5 of the renamings, do not use the digits 1, 4, 6, or 7. Explain how you came up with one of these renamings.
 - b. For 5 of the renamings use only the digits 1, 4, 6, 7, along with zeros.

In real life contexts involving money there are times when using many ways to rename numbers makes sense.

4. Thinking about using only combinations 1 dollar bills, 10 dollar bills, 100 dollar bills, 1000 dollar bills, and 10,000 dollar bills, find at least 8 ways to rename \$21,476. Explain how you came up with one of these renamings.