DIVISIBILITY RULES

A number is divisible by:

2	if the last digit is 0, 2 , 4 , 6, 8
3	if the sum of the digits is divisible by 3
4	if the last two digits are divisible by 4
5	if the last digit is 5 or 0
9	if the sum of the digits is divisible by 9
10	if the last digit is 0
6	if it is divisible by both 2 and 3
15	if it is divisible by both 3 and 5

Examples

1. 795
    a. Is divisible by 3 since the digit sum is 7+9+5 = 21 and 21 is divisible by 3
    b. Is divisible by 5 since the last digit is 5
    c. Is divisible by 15 since it is divisible by both 3 and 5
2. 732
    a. Is divisible by 2 since the last digit is 2
    b. Is divisible by 3 since the digit sum is 7+3+2 = 12 and 12 is divisible by 3
    c. Is divisible by 4 since the last two digits (32) is divisible by 4
    d. Is divisible by 6 since it is divisible by both 2 and 3
3. 9000
    a. Is divisible by 2 since the last digit is 0
    b. Is divisible by 3 since the digit sum is 9+0+0+0 = 9 and 9 is divisible by 3
    c. Is divisible by 5 since the last digit is 0
    d. Is divisible by 6 since it is divisible by both 2 and 3
    e. Is divisible by 9 since the digit sum of 9 is divisible by 9
    f. Is divisible by 10 since the last digit is 0
    g. Is divisible by 15 since it is divisible by both 3 and 5

Problems

Determine which (if any) of the numbers 2, 3, 4, 5, 6, 9, 10, 15 will divide exactly into each of the following:

1. 842
2. 9030
3. 4031
4. 4380
5. 8805

Answers:

1. 2
2. 2, 3, 5, 6, 10, 15
3. None
4. 2, 3, 4, 5, 6, 10, 15
5. 3, 5, 15