

Reteaching Page

4.1 Divisibility

A number is divisible by another number if it is a true multiple of the other number (or if the division problem does **not** have a remainder.

24 is divisible by 3 because $24 \div 3 = 8$ with no remainder.

The following rules are an easy way to check for divisibility.

Divisibility Rules

- 2 – the number will end with a 0, 2, 4, 6 or 8
- 3 – the sum of the digits is a multiple of 3
- 4 – the final two digits are divisible by 4
- 5 – the number will end with a 5 or 0
- 6 – the number is divisible by both 2 **and** 3
- 9 – the sum of the digits is a multiple of 9
- 10 – the number will end with a 0

Apply these rules to numbers and you will be able to easily tell the factors of a number.

2468

- 2 – **2468** ends with an 8 so it is divisible by 2
- 3 – the sum of the digits is $2 + 4 + 6 + 8 = 20$. 20 isn't a multiple of 3
- 4 – the final two digits are 68. $4 * 17 = 68$; **2468** is divisible by 4
- 5 – **2468** ends with 8 not with a 5 or 0
- 6 – the number is divisible by both 2 **but not** 3 so it is not divisible by 6
- 9 – the sum of the digits is 20 which is not a multiple of 9
- 10 – **2468** ends with 8 not with a 0

2468 is divisible by 2 and 4

Use this chart to help you check each of the following for divisibility by 2, 3, 4, 5, 6, 9 and 10.

Number	digit sum	2	3	4	5	6	9	10	Answer
1248	15	✓	✓	✓		✓			2, 3, 4, 6
111									
144									
204									
240									
327									