Divisibility Rules

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Lecture Notes

Notes

- **Divisibility** refers to one number dividing evenly into another number, with 0 remainder.
  - **Divisible**: $12 \div 4 = 3, R\mathbf{0}$
  - **Not divisible**: $11 \div 5 = 2, R\mathbf{1}$
- We use the divisibility rules to quickly determine the divisibility of number, *without using long division*.
  - It would not be wrong to use long division for divisibility, but it will take longer to do.
  - The main benefit from using divisibility rules is the *quickness* of the method.
- Divisibility rules exist for the numbers 4, 6, 7, 8…, but we will not cover them in this course nor in MAT 050.

DIVISIBILITY RULES		
Divisible By?	**Rule for Divisibility**	**Examples**
2	A number is **divisible by 2** if its ones digit is even (0, 2, 4, 6, 8).	10, 86, 102, 384
3	A number is **divisible by 3** if the sum of its digits is divisible by 3.	18, 36, 123, 609
5	A number is **divisible by 5** if its ones digit is 0 or 5.	20, 65, 130, 785
9	A number is **divisible by 9** if the sum of its digits is divisible by 9.	27, 63, 162, 819
10	A number is **divisible by 10** if its ones digit is 0.	30, 90, 170, 540