Lab # 11

Deadline is 8 November, 2020 2pm. Submit on iCollege.

Question#1

How many positive integers between 100 and 888 inclusive,

1. are divisible by 7?

There are 889 numbers, floor(889/7) = 127.

1. are odd?

889 – floor(889/2) = 889-444 = 445.

1. have distinct digits?

889 – (8\*1\*1) = 881.

1. are not divisible by 6?

889 – floor(889/6) = 741.

1. are divisible by either 4 or 7?

Divisible by 4: floor(889/4) = 222.

Divisible by 7: floor(889/7) = 127.

Divisible by 4 and 7: floor(889/28) = 31

Divisible by 4 or 7: 222+127-31 = 318.

1. are not divisible by either 4 or 7?

Not divisible by 4 or 7: 889-318 = 571.

1. are divisible by 4 but not by 7?

Divisible by 4: 222

Not divisible by 4 and 7: 31

Divisible by 4 but not by 7: 222-31 = 191.

1. are divisible by 4 and 7?

floor(889/28) = 31