

## MTH 337, Sample Quiz 2

### Fall 2020

You will have **15 minutes** to take the actual quiz in Gradescope. The quiz will start exactly **5 minutes** after the start of class, 9:15 AM, and will close at 9:30 AM.

1. Write a loop that will print all the positive integers less than 100 the either end in a 3 in a 7.
2. Describe what each of the following Python commands does:
  - i. `break`,
  - ii. `continue`,
  - iii. `pass`.
3. What is the boolean value of the statement: `20 % 9 == 2` and not `(20 % 2 == 1 or 20 % 5 == 0)`.
4. Identify and correct the error in the following code:

```
for i in range(100)
    if i % 3 == 2
        print(i)
```
5. Write a function that takes as input an integer  $n$  and checks if it is a solution to the congruence

$$n^2 + 5n + 6 \equiv 0 \pmod{k}$$

for all positive integers  $k < n$ .

6. Reproduce the LaTeX code for

$$\sin\left(\frac{\pi}{6}\right) = 0.5$$

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