

# MTH 2215 Test 3

SPRING 2021

Pat Rossi

Name \_\_\_\_\_

**Show CLEARLY how you arrive at your answers.**

1. Give the quotient and the remainder when:

(a) 859 is divided by 25.

(b)  $-481$  is divided by 29.

2. Evaluate the quantity  $85 \pmod{21} \equiv$

3. Convert the decimal (base 10) representation of 341 to the equivalent hexadecimal (base 16) expansion

4. Determine whether the integers below are congruent modulo the given number:

(a)  $228 \equiv 58 \pmod{5}$

(b)  $90 \equiv 203 \pmod{17}$

5. Convert the decimal (base 10) representation of 121 to the equivalent binary (base 2) expansion

6. Convert the binary (base 2) representation of  $(1101010)_2$  into the equivalent decimal (base 10) expansion

7. Convert the octal (base 8) representation of  $(4172)_8$  into the equivalent binary (base 2) expansion

