

Name: \_\_\_\_\_ No. \_\_\_\_\_

MATH 206

Quiz 3: 9/27/23

You may use a calculator. You have 10 minutes to complete the quiz. There are 10 points possible.

- 1 (10 pts) Let  $A = \{1, 2, 3, 4\}$ ,  $B = \{5, 6, 7, 8, 9\}$ , and  $C = \{2, 4, 6, 8, 10\}$ .

Let  $f = \{(1, 7), (2, 8), (3, 5)\}$ ,  $g = \{(5, 4), (6, 6), (7, 2), (8, 8), (9, 10)\}$ , and

$h = \{(2, 9), (4, 8), (6, 6), (8, 7), (10, 5)\}$ . Determine whether each of the following statements are true or false and explain.

(a)  $f$  is a one-to-one function from  $A$  to  $B$ .

(b)  $g$  is an onto function from  $B$  to  $C$ .

(c)  $h$  is a one-to-one function from  $C$  to  $B$ .

(d)  $h \circ g(7) = 9$

(e)  $g \circ h(8) = 8$

(f)  $h \circ g$  is onto.