

Math 270 - Basic Discrete Mathematics
Practice Quiz on Section 8.2

Directions: Answer the problems given below.

1. Let $A = \{1, 2, 3, 4, 5, 6\}$. Draw the directed graph for a relation R on A which is reflexive and symmetric *but not transitive*. (You only have to draw the directed graph for such a relation.)

2. Let S be the relation on \mathbb{Z} defined as follows:

$$\text{For all } x, y \in \mathbb{Z}, xSy \Leftrightarrow x < y - 1.$$

In a.-c. circle the correct response (**Yes** or **No**). You do not need to justify your answers.

a. Is S reflexive? **Yes** or **No**

b. Is S symmetric? **Yes** or **No**

c. Is S transitive? **Yes** or **No**