

## Quiz 5

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- Consider a relation defined on the set of salaried employees of a company. No two employees have exactly the same annual salary. The pair  $(x, y)$  is in the relation if  $x$  has a higher salary than  $y$ .
  - Is the relation reflexive, anti-reflexive or neither?
  - Is the relation symmetric, anti-symmetric or neither?
  - Is the relation transitive?
- Consider a relation defined on the set  $\mathbb{R} - \{0\}$ . The pair  $(x, y)$  is in the relation if  $x/y$  is a rational number.
  - Is the relation reflexive, anti-reflexive or neither?
  - Is the relation symmetric, anti-symmetric or neither?
  - Is the relation transitive?
- Below is a directed graph  $G$ . Fill in the edges for  $G^2$  and  $G^+$  below:

