Consider the two relations given below on \( \mathbb{R} \).

\[
xRy \text{ iff } x \leq y
\]
\[
xSy \text{ iff } y - x \geq 2
\]

Choose and complete 2 of the following problems. Justify all answers.

1) Is \( R \) reflexive?
2) Is \( R \) symmetric?
3) Is \( R \) antisymmetric?
4) Is \( R \) transitive?
5) Is \( R \) total?

Choose and complete 2 of the following problems. Justify all answers.

1) Is \( S \) reflexive?
2) Is \( S \) symmetric?
3) Is \( S \) antisymmetric?
4) Is \( S \) transitive?
5) Is \( S \) total?