

Instructions

- Answer each question completely; justify your answers.
 - This assignment is due at 15:00 on Friday March 22nd in Assignment Box #48.
1. Use the construction for embedding a STS(v) into a STS($2v + 1$) to embed a STS(9) into a STS(19).
 2. (a) Find a decomposition of K_{14} into 14 triples and 7 1-factors.
(b) Use the triples and 1-factors from part (a) to construct a STS(21) with a STS(7) as a subsystem.
 3. Find a skew transversal square of side n for
 - (a) $n = 5$
 - (b) $n = 6$