Due date: 2020-11-010 (화) 수업시간 까지

제출방법: (1) A4 용지에 작성하여, (2) 사진으로 촬영하고, (3) pdf file 로 print 하여, (5) e-mail (drwhoyoo@hanyang.ac.kr)로 제출. (6) 파일명은 "LA_HW4_홍길동.pdf"으로 작성

1. Let $W = \text{span}\{1 - 2x, 2x - x^2, 1 - x^2, 1 + x^2\}$ be a subspace of P_2. Find a basis for W.

2. Consider two bases of $\mathcal{R}^3$: $B = \{(1, 0, 0), (0, 1, 0), (0, 0, 1)\}$ and $C = \{(1, 1, 0), (0, 1, 1), (1, 0, 1)\}$

   (a) Find the coordinate vector of $\boldsymbol{v} = (7, 5, 2)$ with respect to C.

   (b) Find the change-of-basis matrix $P_{C \leftarrow B}$.

   (c) When $[\boldsymbol{w}]_B = (1, -1, 1)$, find $[\boldsymbol{w}]_C$.