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MTH 317: Linear Algebra
Professor Sussan
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Homework #6 - 2.15

Assume that all spaces are finite-dimensional unless otherwise stated.
✓ 2.15 Find a basis for, and the dimension of, \mathcal{P}_2 .

Dimensions of \mathcal{P}_n : $\dim(\mathcal{P}_n) = n+1$

Dimension of \mathcal{P}_2 : $\dim(\mathcal{P}_2) = 2+1 = \boxed{3}$

Basis for \mathcal{P}_2 : $\{1, x, x^2\}$ 