

# MATE 5150: Exam 01 Review

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## 1 Polinomial Lagrange Interpolation

## 2 $T : 1 - 1$ and onto

## 3 Determine Basis and Span

## 4 Find $[T]_{\beta}^{\gamma}$

## 5 Answer of Given Questions

In  $R^2$ , let  $L$  be the line  $y = mx$ , where  $m \neq 0$ . Find an expression for  $T(x, y)$ , where

1.  $T$  is the reflection of  $R^2$  about  $L$ .
2.  $T$  is the projection on  $L$  along the line perpendicular to  $L$ . (See the definition of projection in the exercises of Section 2.1.)