

Math 5102 – Linear Algebra– Fall 2024  
w/Professor Penner

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Homework #9 – NONE

Page 180: 6 Let  $T : \mathbb{R}^3 \rightarrow \mathbb{R}^2$  be defined by  $T(a, b, c) = (a + b, 2a - c)$ . Determine  $T^{-1}(1, 11)$ .

Page 180:8 Let  $T : \mathbb{R}^3 \rightarrow \mathbb{R}^3$  be defined by  $T(a, b, c) = (a + b, b - 2c, a + 2c)$ . For each vector  $v$  in  $\mathbb{R}^3$ , determine whether  $v \in R(T)$ .

(a)  $v = (1, 3, -2)$

(b)  $v = (2, 1, 1)$