

Exercise 18

Let P be the plane defined by the equation $x + y + z = 1$. Which of the following points are contained in P ?

- (a) $(0, 0, 0)$
- (b) $(1, 1, -1)$
- (c) $(-3, 8, -4)$
- (d) $(1, 2, -3)$

Solution

$(0, 0, 0)$ is not contained in P because $0 + 0 + 0 = 1$ is a false statement.

$(1, 1, -1)$ is contained in P because $1 + 1 + (-1) = 1$ is a true statement.

$(-3, 8, -4)$ is contained in P because $(-3) + 8 + (-4) = 1$ is a true statement.

$(1, 2, -3)$ is not contained in P because $1 + 2 + (-3) = 1$ is a false statement.