(1) If $u, v \in V$ then

$$u+v = (u_1, 0, 0) + (v_1, 0, 0)$$
$$= (u_1+v_1, 0, 0) \in W$$

Hence, $u+v$ is in W. The given set is closed under addition.

(2)

$$ku = k(u_1, 0, 0)$$
$$= (ku_1, 0, 0)$$

Thus, the given set is closed under addition and scalar multiplication and hence is a subspace of R^3.

(d) All vectors of the form (a, b, c) where $b = a + c + 1$.

Let $u = (u_1, u_2, u_3)$, $u_2 = u_1 + u_3 + 1$

$v = (v_1, v_2, v_3)$, $v_2 = v_1 + v_3 + 1$

be two space vectors in R^3 and k is scalar, than

$$u+v = (u_1, u_2, u_3) + (v_1, v_2, v_3)$$
$$u+v = (u_1, u_1+u_3+1, u_3) + (v_1, v_1+v_3+1, v_3)$$
$$= (u_1+v_1, u_1+u_3+1+v_1+v_3+1, u_3+v_3)$$
$$= (u_1+v_1, u_1+v_1+u_3+v_3+\boxed{2}, u_3+v_3)$$

Hence $u+v$ is not in W. The given set is not subspace.