

QUESTION Which of the following sets of vectors form a basis for \mathbf{R}^3 ?

(a) $(2, 3, 4), (1, -4, 7), (3, 9, -2)$;

(b) $(3, 2, 4), (2, 6, -3), (12, -5, 0)$;

(c) $(1, 23, 11), (2, 5, -4), (0, 41, 26)$.

ANSWER

(a) spans

(b) spans

(c) no - the vectors are of the form $\mathbf{a}, \mathbf{b}, 2\mathbf{a}-\mathbf{b}$.