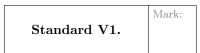
Name:	
J#:	Dr. Clontz
Date:	

MASTERY QUIZ DAY 14

Math 237 – Linear Algebra Fall 2017

Version 1

Show all work. Answers without work will not receive credit. You may use a calculator, but you must show all relevant work to receive credit for a standard.

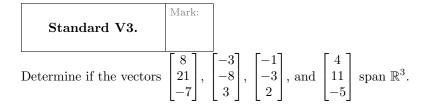


Let V be the set of all polynomials with the operations, for any $f,g\in V,\,c\in\mathbb{R},$

$$f \oplus g = f' + g'$$
$$c \odot f = cf'$$

(here f' denotes the derivative of f).

- (a) Show that scalar multiplication **distributes scalars** over vector addition: $c \odot (f \oplus g) = c \odot f \oplus c \odot g$.
- (b) Determine if V is a vector space or not. Justify your answer.



	Mark:
Standard V4.	

Let W be the set of all polynomials of even degree. Determine if W is a subspace of the vector space of all polynomials.

Standard S2.
$$\begin{bmatrix} & & & \\ & & &$$

Additional Notes/Marks