Dawson	College:	Linear	Algebra:	201-	105	-DW-	S5:	Fall	2022:	Ouiz 9
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Books, watches, notes or cell phones are **not** allowed. The **only** calculators allowed are the Sharp EL-531\*\*. You **must** show all your work, the correct answer is worth 1 mark the remaining marks are given for the work.

**Question 1.** (3 marks) Find a vector of length 3 which is oppositely directed to  $\vec{AB}$  where A(1,5,-3) and B(3,0,-2).

**Questions 2.** Given  $\vec{u} = (1, 2, 0)$  and  $\vec{v} = (2, 1, -1)$ .

- a. (3 marks) Find  $||\vec{a}||$  where  $\vec{a} = (\vec{u} \cdot \vec{v})\vec{u} 2\vec{v}$ .
- b. (3 marks) Find the angle in degrees between  $\vec{u}$  and  $\vec{v}$ .