

## Recitation 5

1. a. linear combination.  $\langle 3, 2 \rangle = 11 \langle 1, 2 \rangle - 4 \langle 2, 5 \rangle$

b. not linear combination

2a. linearly independent

b. not linearly independent  $c_1 = 3c_3, c_2 = c_3, c_3 = c_3$

3. a.  $c_1 = \frac{\psi \cdot u}{|u|^2}$  or  $\frac{\psi \cdot u}{u \cdot u}$       b.  $c_2 = \frac{\psi \cdot v}{|v|^2}$  or  $\frac{\psi \cdot v}{v \cdot v},$        $c_3 = \frac{\psi \cdot w}{|w|^2}$  or  $\frac{\psi \cdot w}{w \cdot w}$