

and so  $T(v)$  is in the "first block" (7)  
span  $\{v_1, \dots, v_a\}$ .

Similarly the "second block" ~~span~~  
span  $\{w_1, \dots, w_b\}$  is  $T$ -invariant, and  
so on.

So in the process of putting a  
transformation  $T$  into Jordan canonical  
form, we will need to break  
 $T$  up ~~into~~ as a direct sum  
of invariant subspaces.

This example suggests that we should  
figure out how to find  $T$ -invariant  
subspaces of  $V$  ~~invariant~~. The next  
section describes a simple method for  
doing so.