

## **Study Unit 8**

### **Activity 8-7**

*Consider the following vectors:  $u = (1, 2, 5)$  and  $v = (2, 3, 5)$ . Determine the following:*

- (a)  $u \cdot v = (1, 2, 5) \cdot (2, 3, 5) = 1 \cdot 2 + 2 \cdot 3 + 5 \cdot 5 = 2 + 6 + 25 = 33$ .
- (b)  $v(2u) = (1, 2, 5) \cdot (2 \times (2, 3, 5)) = (1, 2, 5) \cdot (4, 6, 10) = 1 \cdot 4 + 2 \cdot 6 + 5 \cdot 10 = 4 + 12 + 50 = 66$ .