Soal untuk Tutorial 7 Aljali SI dan IF TA 2022/2023

1. Let **u** = (3, 2, −1), **v** = (0, 2, −3), and **w** = (2, 6, 7). Compute the indicated vectors.
   a. **v** · (**v** × **w**)
   b. (**u** − 3**w**) × (**u** − 3**w**)
   c. (7**v** − 3**u**) × (7**v** − 3**u**)

2. Let **u**, **v**, and **w** be the vectors in Exercises 1. Compute the vector triple product directly, and check your result by using parts (d) and (e) of Theorem 3.5.1. 5.
   a. **u** × (**v** × **w**)
   b. (**u** × **v**) × **w**

3. Use the cross product to find a vector that is orthogonal to both **u** and **v.**
   u = (−6, 4, 2), **v** = (3, 1, 5)

4. Find the area of the parallelogram determined by the given vectors **u** and **v.**
   u = (1, −1, 2), **v** = (0, 3, 1)

5. Find the area of the parallelogram with the given vertices.
   $P_1(1, 2)$, $P_2(4, 4)$, $P_3(7, 5)$, $P_4(4, 3)$