

1. Which of the following vector is parallel to the line of parametric equation $x=(3-5t, -6-t)$.
(a) $(3, -6)$ (b) $(-3, 6)$ (c) $(-5, -1)$ (d) $(1, -5)$
2. If $u, v \in \mathbb{R}^3$ and $u \times v = (3, -2, 1)$, what is $v \times u$?
(a) $(3, -2, 1)$ (b) $(-3, 2, -1)$ (c) $(1, -2, 3)$ (d) $(-1, 2, -3)$
3. Compute the volume of the parallelepiped with sides $u=(2, -6, 2)$, $v=(0, 4, -2)$, $w=(2, 2, -4)$.
(a) 13 (b) 14 (c) 15 (d) 16
4. Suppose $u \cdot (v \times w) = 5$, find $(v \times w) \cdot u = ?$
(a) $1/5$ (b) 5 (c) $-1/5$ (d) -5
5. Use the cross product to find a vector that is orthogonal to $u=(-6, 4, 2)$, $v=(3, 1, 5)$.
(a) $(18, 36, -18)$ (b) $(9, 18, -9)$ (c) $(6, 12, -6)$ (d) $(1, 2, -1)$