

Ответы.

1.

$$\begin{aligned}(\mathbf{A} \cdot \mathbf{B})\mathbf{C} &= 6\mathbf{C} = 6(\mathbf{j} + \mathbf{k}), \quad \mathbf{A}(\mathbf{B} \cdot \mathbf{C}) = -2\mathbf{A} = -2(2, -1, -1), \\(\mathbf{A} \times \mathbf{B}) \cdot \mathbf{C} &= \mathbf{A} \cdot (\mathbf{B} \times \mathbf{C}) = -8, \quad (\mathbf{A} \times \mathbf{B}) \times \mathbf{C} = 4(\mathbf{j} - \mathbf{k}), \\ \mathbf{A} \times (\mathbf{B} \times \mathbf{C}) &= -4(\mathbf{i} + 2\mathbf{k})\end{aligned}$$

2.

$$\mathbf{B} \cdot \mathbf{C} = -16$$

8.

$$4\mathbf{i} - 8\mathbf{j} + 4\mathbf{k}, \quad 4, \quad -8, \quad \frac{4}{\sqrt{3}}$$