Task. Given that:
$$r_1 = 6i - 8j + 2k, \qquad r_2 = 4i + 5j + 7k, \qquad r_3 = -2i + j + 6k$$
Find (r_1, r_2).

Solution. The scalar product (r_1, r_2) of vectors
$$r_1 = a_1 i + a_2 j + a_3 k, \qquad r_2 = b_1 i + b_2 j + b_3 k,$$
can be computed by the following formula:
$$(r_1, r_2) = a_1 b_1 + a_2 b_2 + a_3 b_3.$$

In our case
$$r_1 = 6i - 8j + 2k, \qquad r_2 = 4i + 5j + 7k$$
and so
$$a_1 = 6, \qquad a_2 = -8, \qquad a_3 = 2$$
$$b_1 = 4, \qquad b_2 = 5, \qquad b_3 = 7$$

Substituting values we get
$$(r_1, r_2) = a_1 b_1 + a_2 b_2 + a_3 b_3 = 6 * 4 + (-8) * 5 + 2 * 7 = 24 - 40 + 14 = -2.$$

Answer. $(r_1, r_2) = -2$.