

Provide a clear and organized presentation. Show all of your work, completely simplify answers, and give exact values only.

Consider $\vec{r}(t) = \left\langle \frac{2t^4 - t^3 + 4t^2 + 9t - 11}{2t^3 - 3t^2 + 7t - 3}, \cos(\ln t), \frac{t}{t + \sqrt{t-2}} \right\rangle$. Evaluate $\int \vec{r}(t) dt$