## Question 17924

Let us have any point $(x, y)$ on the plane xy. The position vector will then have coordinates $\vec{r}(x, y, 0)$, and normal vector will have coordinates $\vec{n}(0,0,1)$. Hence, $\vec{n} \cdot \vec{r} = 0 \cdot x + 0 \cdot y + 1 \cdot 0 = 0$.