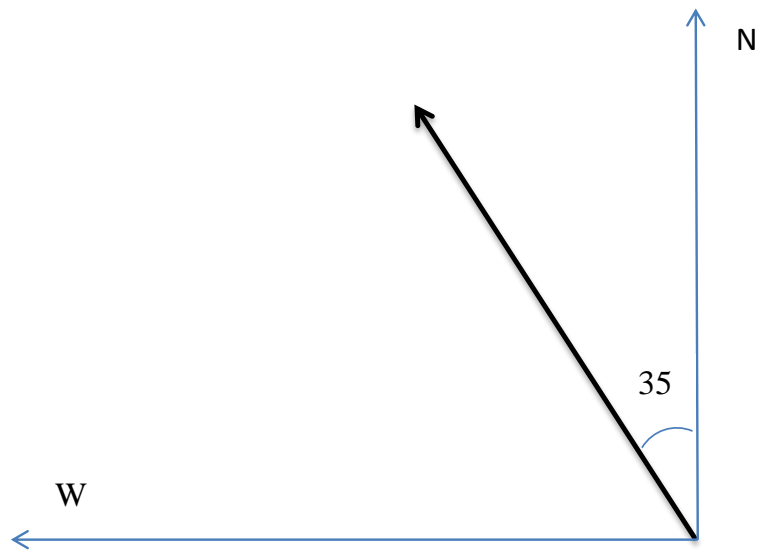A plane has a velocity of 951km/h in a direction 35 degrees west of north. What is the north component of the plane?

N

35

W

v – vector of velocity

The north component of a vector v is given as |v| cosθ, where θ is the angle between v and north direction.

Therefore:

$$v_N = v \cos 35 = 951 * \cos 35 = 779 \frac{km}{h}$$

Answer: $779 \frac{km}{h}$