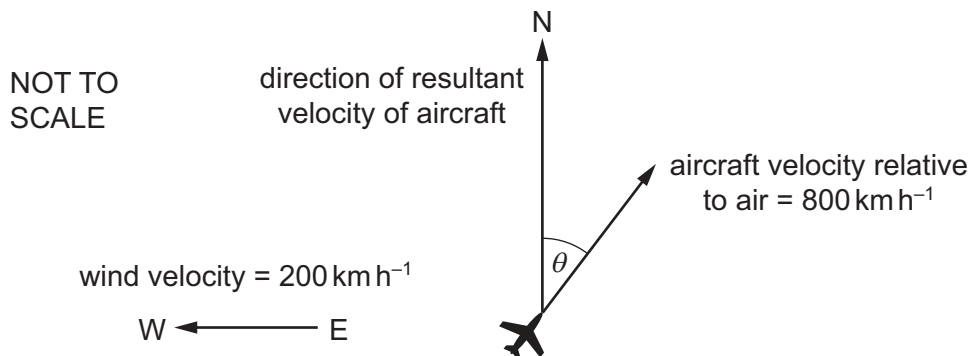3 An aircraft heads in a direction at an angle θ east of north with a horizontal velocity relative to the air of $800\,km\,h^{-1}$. The wind blows with a horizontal velocity of $200\,km\,h^{-1}$ from east to west, as shown.

The resultant velocity of the aircraft is in a direction due north.

What is angle θ and what is the magnitude of the resultant velocity?

	$\theta/^{\circ}$	resultant velocity / $km\,h^{-1}$
A	14	770
B	14	820
C	76	770
D	76	820