Answer on Question #52847 – Math – Trigonometry

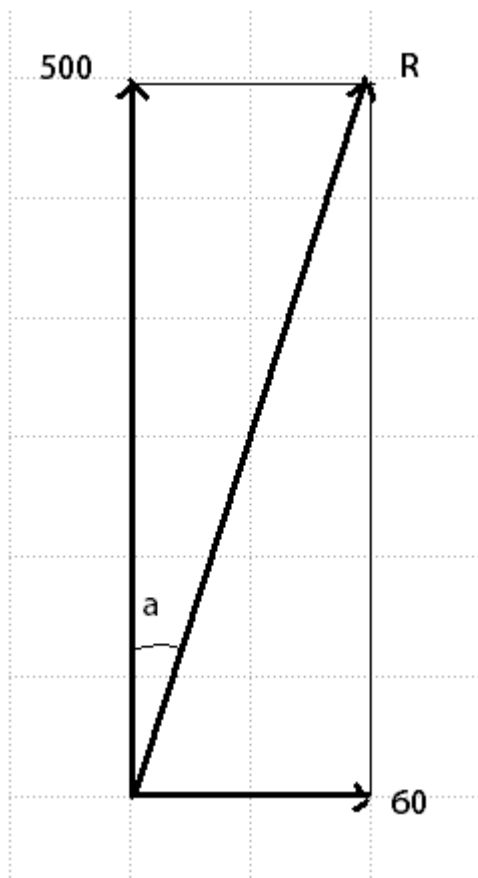If the wind speed is 60 mph and the velocity due to the thrust is 500 mph show that the resultant velocity R is

a) at an angle of 6.84 degrees to the thrust of the engines and

b) is about 504 mph

Show all working.

Solution

a) $\alpha = arctan\dfrac{60}{500} = arctan(0.12) \approx 6.84^0$

b) $R = \sqrt{500^2 + 60^2} = \sqrt{253600} \approx 504\ mph.$