

LONDON, TIMES AND THE THOSE WHO ATTENDED AT LEVELS

# THE TEST

7/7/85

## PROBLEM

You are the pilot of a Tornado F2 on Combat Air Patrol (CAP) off the East coast of England (Point A); you have been airborne for an hour and have 5,000 kilograms (kg) of fuel left. The time is 1200 hours. A VC10 Tanker is at your disposal 75 nautical miles (nm) South at Point Z. The Tanker cruises at 300 knots (kts) and discharges fuel at 500 kg/minute (kg/min). You are under the control of a Nimrod Airborne Early Warning aircraft at Point X.

A raid is detected flying at 420 kts, 110 nm to the East of a ground radar site at Y. It obviously plans to attack the radar site. You are ordered to engage the attackers at Point B, 40 nm East of the radar site and 100 nm from your current position.

You should allow 10 minutes for an intensive dog-fight to destroy the enemy aircraft once they have been engaged. The weather is closing-in and it is vital that you complete your mission and land as soon as possible. Three airfields are available to you - Points C, D, and E. Given the performance data on the diagram, at which airfield would you land, at what time; and with what fuel remaining? You must never have less than 500 kg of fuel in your tanks. (Ignore the effect of turns and acceleration/deceleration on fuel used)

If you wish to discuss your solution and the careers available in the Royal Air Force, write to Group Captain Paul Terrett, OBE, at (OX) Officer Careers (19/14/07), Stanmore HA7 4PZ. Please include your date of birth and present and/or intended qualifications. Or contact your local RAF Careers Information Office. The number is in the phone book under Royal Air Force. Formal application must be made in the UK.

