1 Direction

1. In a three figure group, express the following directions:

   (a) North: 000
   (b) South: 180
   (c) East: 090
   (d) West: 270
   (e) Northeast: 045
   (f) Southwest: 315

2. Runways are numbered according to their magnetic track. They are abbreviated to a 2 figure group. For example, the southerly runways at Sydney are 16. Because there are parallel runways, they are identified as runways 16 Left and 16 Right.

   (a) Essendon airport has a runway with a magnetic heading of 257°. What would that runway be designated? **26**
   (b) Mackay Airport in Queensland has its northern runway magnetic heading as 319°. What would this runway be designated as? **32**
   (c) Rockhampton's southern runway, heading is 148°. What would this runway be designated? **15**
   (d) What is the reciprocal of runway 13 at Moorabbin? **31**

3. In order to referenfce the position of other traffic or features outside the cockpit we use the clock code. Straight ahead is known as "12 O'Clock" and directly behind is our "6 O'Clock". Above the horizon is high; behind the horizon is low.

   (a) If we are told to lookout for aircraft traffic at our "9 O'Clock", which window should we look out of? **Left**
   (b) What about our "3 O'Clock". **Right**

4. Heading is the direction in which the aircraft is pointing, or the angle, measured in degrees clockwise from magnetic north to the longitudinal axis to the aircraft. Simply, the heading can be described as the direction that the aircraft's nose is pointing.

   If North is expressed as 360, what is—

   (a) South **180**

(b) East **90**

(c) West **270**

2 Time

Aviation uses the 24-hour clock, where midnight is expressed 0000. The four digit number represents hours and minutes. So 5:30 pm is expressed as 1730 and 6:00 am is 0600.

1. In the 4-figure time group, express:

   (a) 4.15 am **0415**

   (b) 4.45 pm **1645**

   (c) 9.30 pm **2130**

   (d) 11.40 pm **2340**

2. Next we can add the date to this group to make it a 6-figure time-group. An example is 031530. This is 1530 (3.30 pm) on the 3rd of the month. This time group is regularly used in aviation forecasting and aircraft arrival and departure times.

   (a) Express the date/time right now in a 6-figure time group. **272130**

   (b) Express 5.45 pm next Friday. **291745**

3. Finally, an 8-figure time group incorporates the month. So midday on Christmas Day is expressed as 12251200.

   (a) What was 3 pm yesterday? **201902261500**

   (b) What is 8.15 am next Tuesday? **201903050815**