UNIT 6 EXERCISES 1-5

TIME

2008A

1. **Answer (D):** The machine worked for 2 hours and 40 minutes, or 160 minutes, to complete one third of the job, so the entire job will take $3 \cdot 160 = 480$ minutes, or 8 hours. Hence the doughnut machine will complete the job at 4:30 PM.

2009A

1. **Answer (A):** There are $60-34 = 26$ minutes from 10:34 AM to 11:00 AM, there are 2 hours from 11:00 AM to 1:00 PM, and there are 18 minutes from 1:00 PM to 1:18 PM. Thus the flight lasted 2 hours and $26 + 18 = 44$ minutes. Hence $h + m = 2 + 44 = 46$.

2015B

2. **Answer (B):** The first two tasks together took 100 minutes—from 1:00 to 2:40. Therefore each task took 50 minutes. Marie began the third task at 2:40 and finished 50 minutes later, at 3:30 PM.

2006A 4. **(E)** The largest possible sum of the two digits representing the minutes is $5+9 = 14$, occurring at 59 minutes past each hour. The largest possible single digit that can represent the hour is 9. This exceeds the largest possible sum of two digits that can represent the hour, which is $1 + 2 = 3$. Therefore, the largest possible sum of all the digits is $14 + 9 = 23$, occurring at 9:59.

2010B 4. **Answer (B):** A month with 31 days has 3 successive days of the week appearing five times and 4 successive days of the week appearing four times. If Monday and Wednesday appear five times then Monday must be the first day of the month. If Monday and Wednesday appear only four times then either Thursday or Friday must be the first day of the month. Hence there are 3 days of the week that could be the first day of the month.

2016B 5. **Answer (B):** Because $919 = 7 \cdot 131 + 2$, the war lasted 131 full weeks plus 2 days. Therefore it ended 2 days beyond Thursday, which is Saturday.