

 **Global Runway Sequencing Challenge Worksheet****Name:** _____**Date:** _____**Activity Instructions**

1. Work in pairs to calculate the arrival times of planes coming from different airports around the world to Dumaguete City, Philippines.
2. Each plane takes off at 4:00 PM local time on Monday, December 1st.
3. Only one plane can land at a time. The earliest arrival lands first.
4. Use your knowledge of time zones to determine the correct arrival sequence.
5. You have 8 minutes to complete the table.
6. After finishing, present your work and answer the reflection question below.

Part A: Calculate Arrival Times

| Plane | Departure Airport | Takeoff Time (Local) | Time Difference to PHT | Arrival Time in Dumaguete (PHT) | Sequence (1 = first to land) |
|-------|-----------------------------|----------------------|------------------------|---------------------------------|------------------------------|
| A | Reykjavik, Iceland | 4:00 PM | | _____ | |
| B | Vancouver, Canada | 4:00 PM | | _____ | |
| C | Manila, Philippines | 4:00 PM | | _____ | |
| D | Bangkok, Thailand | 4:00 PM | | _____ | |
| E | McMurdo Station, Antarctica | 4:00 PM | | _____ | |

Note: To get the arrival time in PHT, add the time difference to the local takeoff time. Then determine the correct landing sequence.

Part B: Reflection Question**Question:**

Why is precision important in time zone calculations, and what could be the consequences of a one-hour scheduling error in professional or financial contexts?

Answer on the back:

Answer:

 **Tips for Success**

- Double-check your time zone conversions.
- Remember the runway constraint: no two planes can land at the same time.
- Work efficiently with your partner, but accuracy matters more than speed.
- You may use the remaining space for calculation

 **Analytic Rubric – Global Runway Sequencing Challenge**

| Criteria | Excellent (4 pts) | Proficient (3 pts) | Basic (2 pts) | Needs Improvement (1 pt) | Weight | Score |
|--|---|--|---|---|--------|-------|
| Time Calculation & Landing Sequence (Accuracy) | All departure times correctly converted to PHT; landing sequence fully correct with no conflicts. | Most departure times correctly converted; 1 minor error in sequence. | Some departure times correctly converted; 2 errors in sequence. | Many or all departure times incorrect; sequence mostly wrong. | 5 | |
| Calculation Process & Work Shown | All steps clearly shown; logical and easy to follow. | Most steps shown; mostly clear reasoning. | Few steps shown; reasoning partially clear. | Minimal or no work shown; reasoning unclear. | 5 | |
| Reflection Answer (Importance of Precision & Consequences) | Provides a very clear, detailed, and well-connected explanation; shows strong understanding of professional/financial consequences. | Provides an adequate explanation with some details and connections. | Provides a simple or partially relevant explanation. | Explanation missing, unclear, or irrelevant. | 10 | |
| Collaboration & Time Management | Works effectively with partner; completes task within 8 minutes. | Works with partner; completes most tasks on time. | Limited collaboration; some tasks incomplete. | Does not collaborate effectively; task largely incomplete | 5 | |

Total Score: ___ / 100