

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.
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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