



**Federal Aviation
Administration**

***55054002
EN ROUTE
RADAR ASSOCIATE
CONTROLLER TRAINING PART B:
NONRADAR***

**Handout 1: Practice Exercises 1, 2, 3
Lesson 1: Longitudinal Separation**

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PRACTICE EXERCISE 1: APPLYING 44 OR 22 KNOT SEPARATION

Practice Exercise 1: Applying 44 or 22 Knot Separation

- **Purpose**

- Apply the 44 or 22 knot rule for longitudinal separation

- **Materials**

- Practice exercise 1 from Lesson 1 handout
- Pen or pencil

- **Directions**

- This exercise takes approximately 30 minutes to complete. Scan the map and flight strips. Write your answers to questions 1-4 in the space provided, indicating whether the 44 or 22 knot rule can be applied to the situation. You are limited to using longitudinal separation only.



Lesson 1: Longitudinal Separation

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Purpose

Apply the 44 or 22 knot rule for longitudinal separation

Materials



Handout:

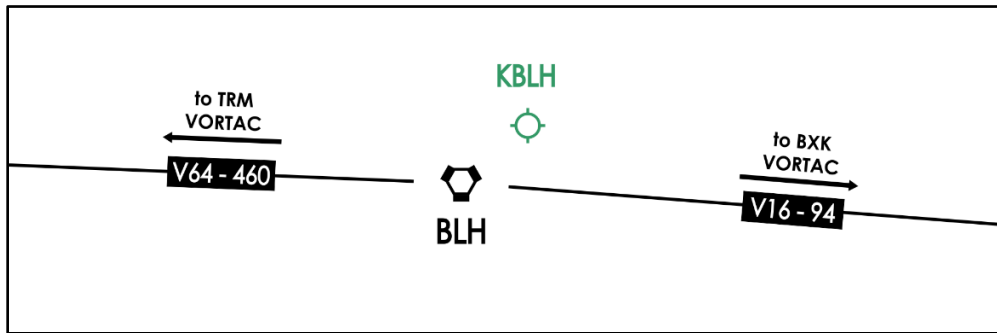
- ⦿ Practice exercise 1 from Lesson 1 handout
 - ⦿ Pen or pencil
-

Directions

This exercise takes approximately 30 minutes to complete. Scan the map and flight strips. Write your answers to questions 1-4 in the space provided, indicating whether the 44 or 22 knot rule can be applied to the situation. You are limited to using longitudinal separation only.

PRACTICE EXERCISE 1: APPLYING 44 OR 22 KNOT SEPARATION (CONT'D)

1.



N84PR C414/T T210 G212 02 226 01	BXK 0220	02 ⁴⁷ 0247 BLH	80✓	TRM	KDVT PXR V16 BLH V64 SLI KLGB	1572
N21HA C310/T T168 02 206 01		↑ KBLH P0225	80	TRM 80	KBLH BLH V64 HEMET KHMT/0100	2167

Time is 0248. What is the earliest time N21HA may be released? Explain your answer.

PRACTICE EXERCISE 1: APPLYING 44 OR 22 KNOT SEPARATION (CONT'D)

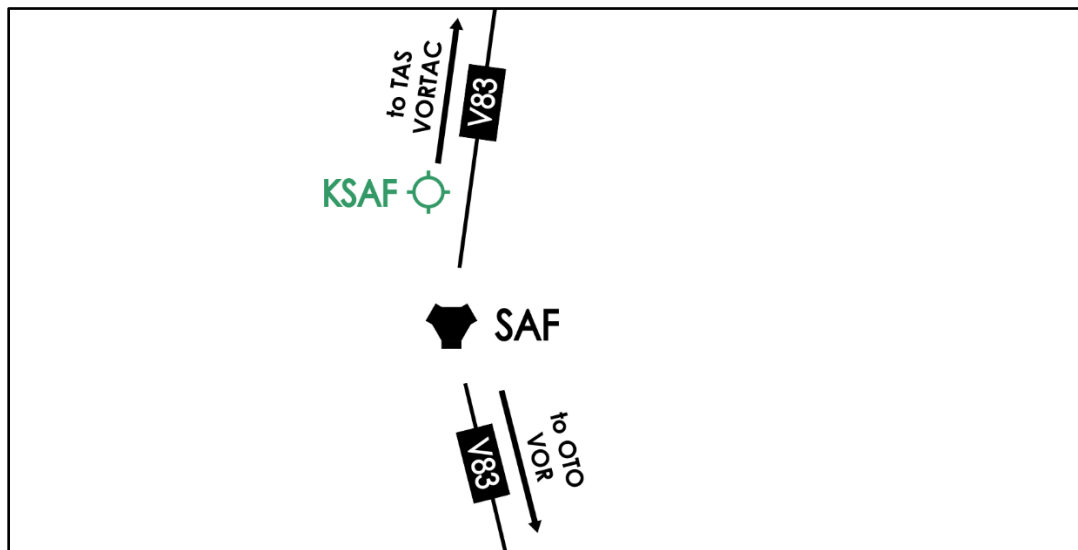
2.

N7193U R22/G T85 49 539 01		↑		ALMON	KTUS TUS V105 PXR KPHX/0031	4220
		KTUS P1722		80		
N75VC SH36/A T185 49 079 01		↑	↑80	ALMON	KTUS TUS V105 PXR KPHX/0105	4366
						D-A
		KTUS P1722		80	CLV30	

Time is 1726. What is the earliest time N7193U may be released? Explain your answer.

PRACTICE EXERCISE 1: APPLYING 44 OR 22 KNOT SEPARATION (CONT'D)

3.

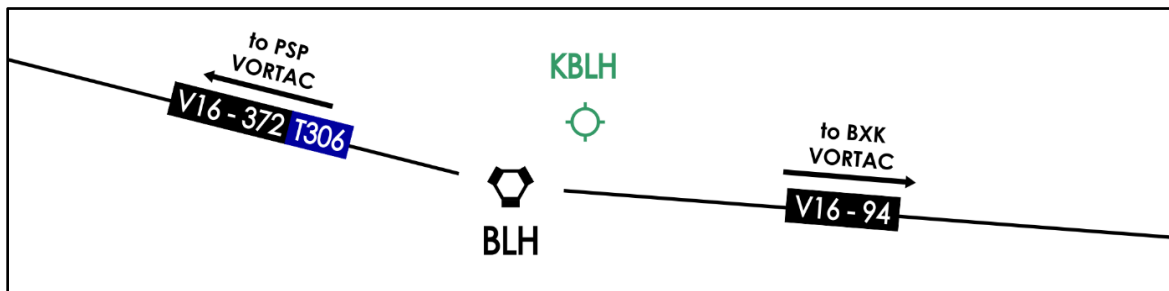


N7178Q C172/G T130 G111 16 356 01	TAS 0220	20 ²² 22 SAF	90✓	0T0	KMVI ALS V83 CME KROW/0232	1572
N115LF CL30/L T458 16 701 01		↑ KSAF P2030		0T0 400	KSAF SAF V83 0T0 TCS J13 BECON UT13 LMM SJD MMSD/0141	2167

Time is 2023. What is the earliest time N115LF may be released? Explain your answer.

PRACTICE EXERCISE 1: APPLYING 44 OR 22 KNOT SEPARATION (CONT'D)

4.



N72AZ PC12/L T244 G232 42 971 04	BXK 1558	22 16 22 1622 BLH	80✓	PSP	KPHX BXK V16 PSP KPSP/0109	1572
N323RB SR22/G T155 42 091 01		↑ KBLH P1630		PSP 80	KBLH BLH V16 PSP V386 SOGGI APLES PMD V197 EHF COREZ AVE V107 PXN WINDY SMONE KLVK/0308	2167
N550BZ BE55/G T190 16 701 01		↑ KBLH P1630		PSP 80	KBLH BLH V16 DODGR KEMT/0045	1025

Time is 1625. What is the most efficient order to release N323RB and N550BZ? Explain your answer.

PRACTICE EXERCISE 2: APPLYING SAME COURSE SEPARATION

Practice Exercise 2: Applying Same Course Separation

- **Purpose**

- Apply same course longitudinal separation

- **Materials**

- Practice exercise 2 from Lesson 1 handout
- Pen or pencil

- **Directions**

- This exercise takes approximately 30 minutes to complete. Scan the flight strips. Determine if longitudinal separation can be established. Write your answers to questions 1-2 in the space provided.



Lesson 1: Longitudinal Separation

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Purpose

Apply same course longitudinal separation

Materials



Handout:

- ⦿ Practice exercise 2 from Lesson 1 handout
 - ⦿ Pen or pencil
-

Directions

This exercise takes approximately 30 minutes to complete. Scan the flight strips. Determine if longitudinal separation can be established. Write your answers to questions 1-2 in the space provided.

PRACTICE EXERCISE 2: APPLYING SAME COURSE SEPARATION (CONT'D)

1.

DAL240 B738/L T448 G456 Ø2 226 Ø1	TFD Ø231	Ø2 ⁴⁹		370✓	EWM	KLAX DOTSS2 CNERY BLH J169 TFD J5Ø SSO J4 INK GEEKY SOCKK3 KDFW	4111
		49					
		SSO					

AAL831 A319/L T458 G465 Ø2 226 Ø1	TFD Ø225	Ø2 ⁴³		350✓	EWM	KLAX DOTSS2 CNERY BLH J169 TFD J5Ø SSO J4 INK GEEKY SOCKK3 KDFW	4306
		43					
		SSO					

Time is 0235. DAL240 requests a descent to FL330. Indicate what steps you would use and the minima to apply in order to accommodate this request.

PRACTICE EXERCISE 2: APPLYING SAME COURSE SEPARATION (CONT'D)

2.

N99329 C182/T T124 G131 22 226 01	DEBRA 2150	22 ¹³	60 ✓	CDS	KROW CME V280 TX0 V530 CDS V14 IRW KOKC	4306
		I3 2214				
		TX0				
N1762T C185/T T135 G142 22 076 01	ACH 2110	22 ⁰⁹	80 ✓	CDS	KSAF SAF V62 TX0 V530 CDS V14 HBR KHBR	1534
		09 2209				
		TX0				

Time is 2221. N99329 is requesting a climb to 10,000'. Can you issue this clearance? Explain your answer.

PRACTICE EXERCISE 3: APPLYING OPPOSITE COURSE SEPARATION

Practice Exercise 3: Applying Opposite Course Separation

- **Purpose**

- Apply opposite course longitudinal separation

- **Materials**

- Practice exercise 3 from Lesson 1 handout
- Pen or pencil

- **Directions**

- This exercise takes approximately 20 minutes to complete. Scan the map and flight strips. Determine if longitudinal separation can be established. Write your answers to questions 1-2 in the space provided.



Lesson 1: Longitudinal Separation

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Purpose

Apply opposite course longitudinal separation

Materials



Handout:

- ⦿ Practice exercise 3 from Lesson 1 handout
 - ⦿ Pen or pencil
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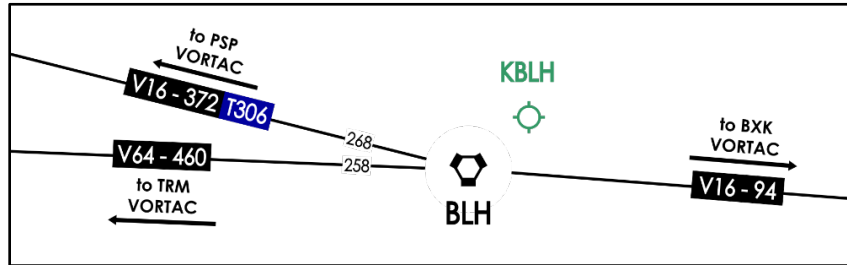
Directions

This exercise takes approximately 20 minutes to complete. Scan the map and flight strips. Determine if longitudinal separation can be established. Write your answers to questions 1-2 in the space provided.

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PRACTICE EXERCISE 3: APPLYING OPPOSITE COURSE SEPARATION (CONT'D)

1.



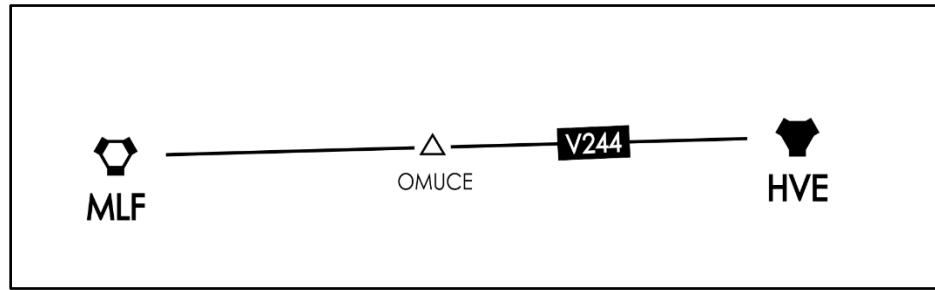
N7178Q C172/G T130 G111 16 356 04	TRM	10 ⁴⁸	↓	90✓		KTOA WILMA V64 BLH KBLH/1052	1572
	1002	48					
		BLH					
N75VC SH36/A T185 16 079 01			↑	↑80	PSP	KBLH BLH V16 DODGR KEMT/0049	4366
				60			
		1025/26 KBLH P1022			80	CLV30	D-A

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PRACTICE EXERCISE 3: APPLYING OPPOSITE COURSE SEPARATION *(CONT'D)*

Time is 1034. N7178Q requests lower. How can you provide separation?

2.



N14HJ PC12/A T180 G194 23 773 04	HVE	01 ¹⁴	160✓	EWM	KGUC HBU V244 TPH KTPH/0221 RP OMUCE/58	1534
	0041	14				
		MLF				
N161JW BE20/A T230 G215 23 226 03	TFD	00 ⁴³	170✓	HVE	KCDC V235 MLF V244 MTK KMTJ/0136 RP OMUCE/58	2654
	0231	43 0043				
		MLF				

Time is 0058. N161JW is requesting lower. Can you issue the clearance? Explain your answer.
