

**Introduction to
Sailing
March 20, 2023**



Today's Agenda

- 1. Rules of the Road**
 - Stand On Vessel
 - Give Way Vessel
- 2. Aids to Navigation (ATONs)**
- 3. Knot Lesson – Coiling a Line**
- 4. Final Exam (take home)**

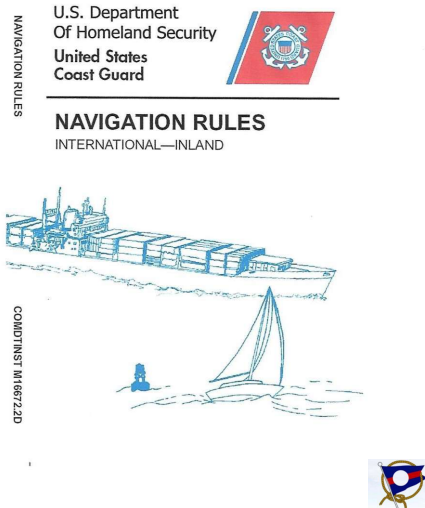


Laguna Woods Yacht Club
Introduction to Sailing, February-March 2023

Safe Navigation: Introduction to the Rules of the Road and Aids to Navigation

Rules of the Road

A system of rules created to avoid collisions at sea



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COMPLIANT 11/85/220

Rules of the Road

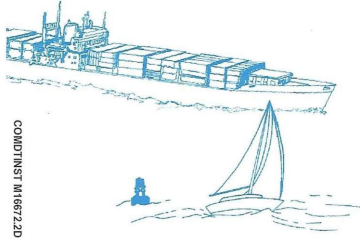
A system of rules created to avoid collisions at sea.

- A nautical counterpart to the Vehicle Code

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Rules of the Road

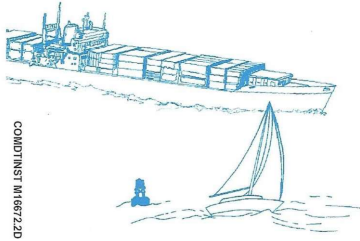
A system of rules created to avoid collisions at sea.

- A nautical counterpart to the Vehicle Code
- Prescribes necessary safety and signaling equipment for vessels and establishes right of way rules for safe navigation

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Rules of the Road

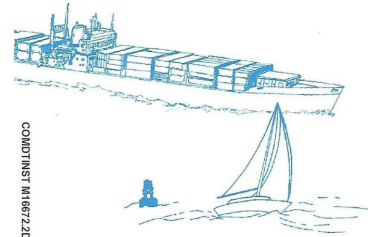
A system of rules created to avoid collisions at sea.

- A nautical counterpart to the Vehicle Code
- Prescribes necessary safety and signaling equipment for vessels and establishes right of way rules for safe navigation
- Applies to virtually all watercraft, from container ships to small sailboats

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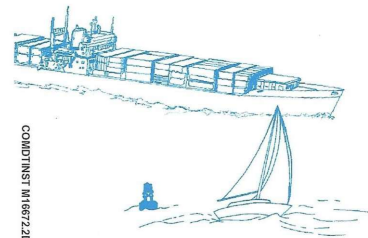
Today's objectives:

1. Learn some basic right of way rules that will cover almost any situation you're likely to encounter on day sails from Dana Point; and
2. Learn some basic buoys and markers and what they mean.

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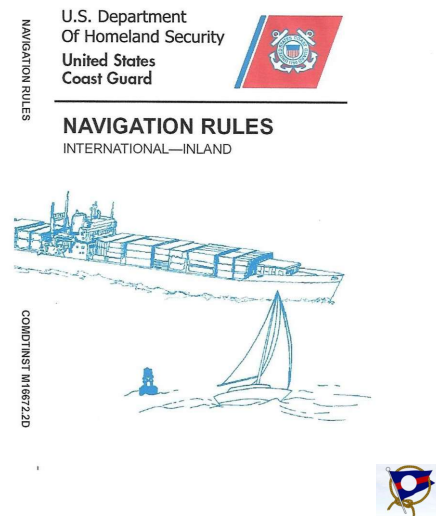


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Part 1: Who has the right of way?

- Unlike motor vehicles, vessels aren't constrained by physical roadways, so special right of way rules have been created to prevent collisions.



Right of way at sea – basic concepts

The right of way rules are lengthy and comprehensive.

For now, be aware of these basic concepts:



Right of way at sea – basic concepts

- Follow the “Lookout Rule.” Aboard any vessel **keep your eyes and ears open**, and don’t be shy about pointing out hazards such as other vessels or objects in the water.



Right of way at sea – basic concepts

- Follow the “Lookout Rule.” Aboard any vessel keep your eyes and ears open, and don’t be shy about pointing out hazards such as other vessels or objects in the water
- **Be aware of your surroundings and be prepared to take action early to avoid accidents. Be prudent – *don’t insist on asserting the right of way if doing so would make an accident more likely.***



Right of way at sea – basic concepts

- Follow the “Lookout Rule.” Aboard any vessel keep your eyes and ears open, and don’t be shy about pointing out hazards such as other vessels or objects in the water
- Be aware of your surroundings and be prepared to take action early to avoid accidents. Be prudent – don’t insist on asserting the right of way if doing so would make an accident more likely
- **Above all, drive defensively. “The right of way goes to the vessel with the least competent crew.”- Mike Baiocchi**



Right of way at sea – from theory . . .

The right of way is based on a **hierarchy of privilege** among vessels. (This will be covered in more detail in the Intermediate class.)



Right of way at sea – from theory . . .

For now, just remember
this general concept:

Less maneuverable
vessels are given
privilege over **more**
maneuverable
vessels.



Right of way at sea – from theory . . .

Why?

*It's easier for the
more maneuverable
vessel to get out of
the way.*



... to practice

When vessels are converging, the rules designate a “stand on” vessel and a “give way” vessel

- ✓ Duty of the ***stand on vessel***: **maintain course and speed**
- ✓ Duty of the ***give way vessel***: **take early and decisive action to alter course**



Right of way problems aboard Hiatus generally arise in these situations:

- sail vs. sail
- sail vs. power
- power vs. power
- overtaking vessels



Sail vs. Sail



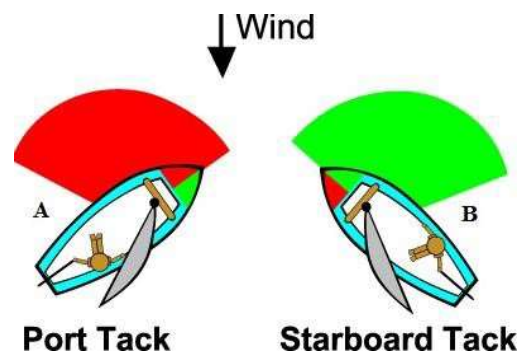
Sail vs. Sail - vessels on different tack

When sailboats converge on different tacks, right of way will depend on what tack the boats are on.

Tack can be determined by the position of the boom.

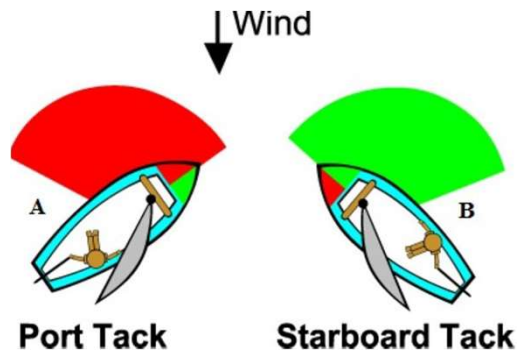
(A) Boom to starboard = **port tack**

(B) Boom to port = **starboard tack**



Sail vs. Sail - vessels on different tack

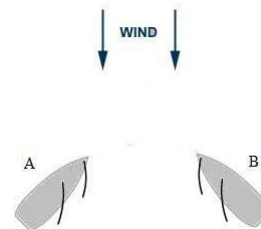
- **RULE:** When sailboats are crossing on different tacks, the sailboat on starboard tack has the right of way.



Sail vs. Sail - vessels on different tack

QUESTION:

- Which sailboat has the right of way?



Sail vs. Sail - vessels on different tack

ANSWER:

➤ B



Sail vs. Sail - vessels on different tack

Here's what this might look like:

These boats are on different tacks.

Our boat is on **starboard tack** and the other vessel is on **port tack** so we have the right of way and the other vessel must give way.



Sail vs. Sail - vessels on different tack

QUESTION:

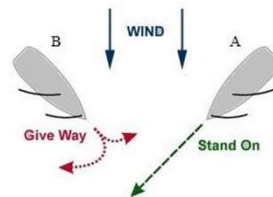
- Which sailboat has the right of way?



Sail vs. Sail - vessels on different tack

ANSWER:

- A



Sail vs. Sail - vessels on different tack

Here's what this might look like:

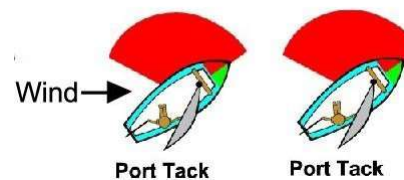
These boats are on different tacks

Our boat is on **port tack** and the other vessel is on **starboard tack** so we must give way.



Sail vs. Sail - vessels on same tack

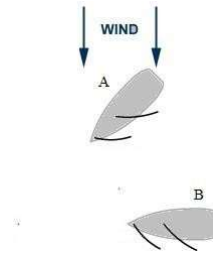
- **RULE:** When sailboats are crossing on the same tack, the sailboat to leeward has the right of way



Sail vs. Sail - vessels on same tack

QUESTION:

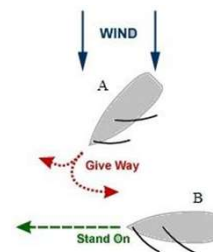
- Which sailboat has the right of way?



Sail vs. Sail - vessels on same tack

ANSWER:

- B



Sail vs. Sail - vessels on same tack

Here's what that might look like:

Note both boats are on **starboard tack**

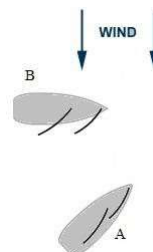
Our boat is downwind of the other boat so we have right of way



Sail vs. Sail - vessels on same tack

QUESTION:

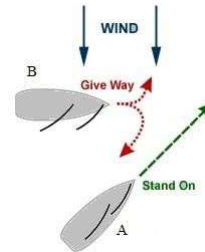
➤ Which sailboat has the right of way?



Sail vs. Sail - vessels on same tack

ANSWER:

➤ A

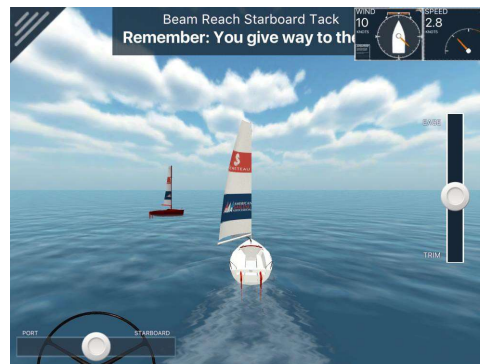


Sail vs. Sail - vessels on same tack

Here's what that might look like:

Note both boats are on **starboard tack**

Our boat is upwind of the other boat so it has the right of way and we must give way



Sail vs. Sail - Summary

FERNHURST BOOKS

<https://www.youtube.com/watch?v=iS8d00QjU5Q>

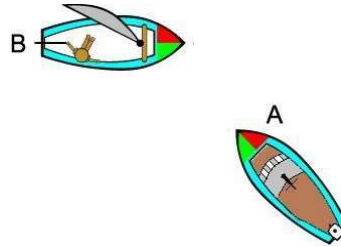


Sail vs. Power



Sail vs. power - crossing

- RULE: When a sailboat and a powerboat are crossing, the sailboat has the right of way



Sail vs. power - crossing

QUESTION:

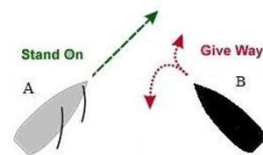
- Which vessel has the right of way?



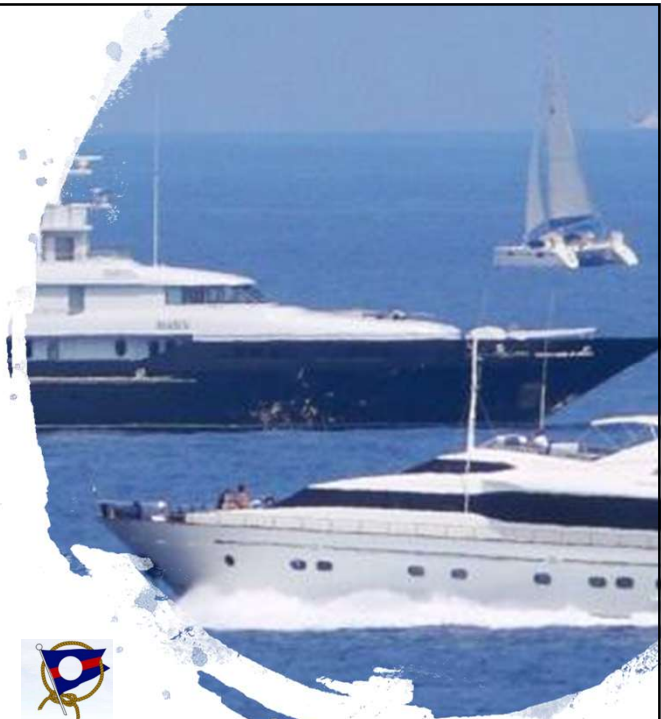
Sail vs. power - crossing

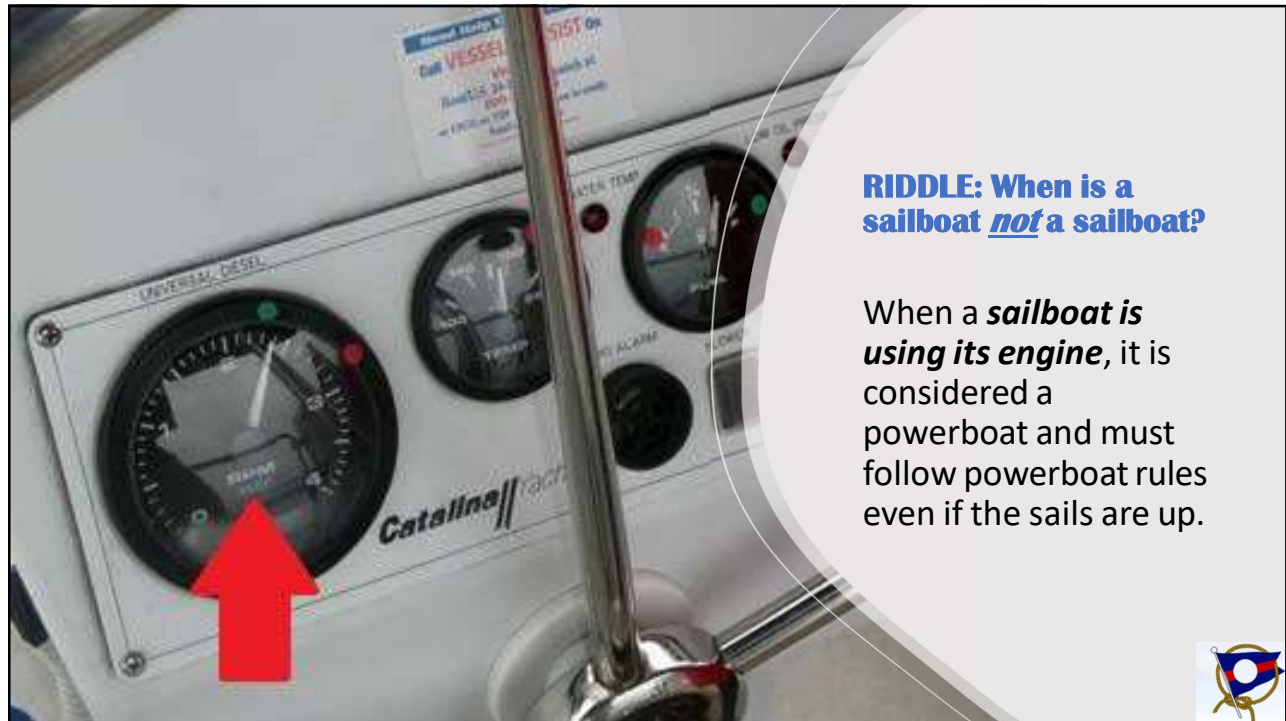
ANSWER:

➤ A



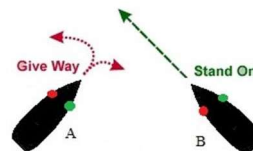
Power vs. Power





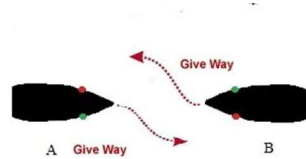
Power vs. Power - crossing

- **RULE:** When two powerboats are crossing the boat to starboard has the right of way



Power vs. Power – head to head

- RULE: When two powerboats are approaching head to head, each boat gives way to starboard

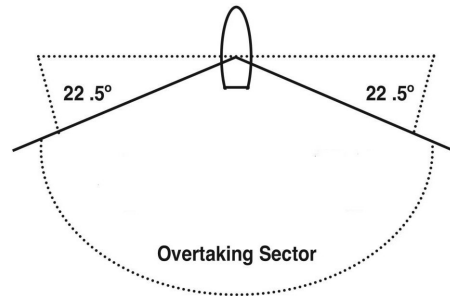


Overtaking



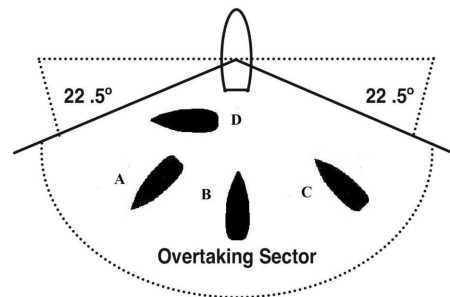
Definition of overtaking

NOTE: You are overtaking another vessel if you are ***approaching*** anywhere within the overtaking sector.



Definition of overtaking

Question: Which two vessels are overtaking -
- A and D, or B and C?

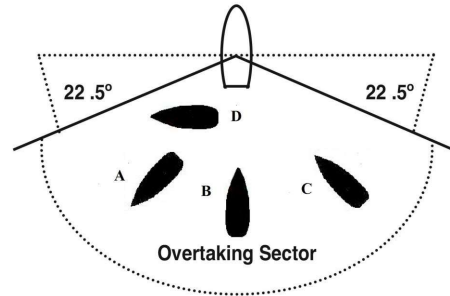


Definition of overtaking

Answer:

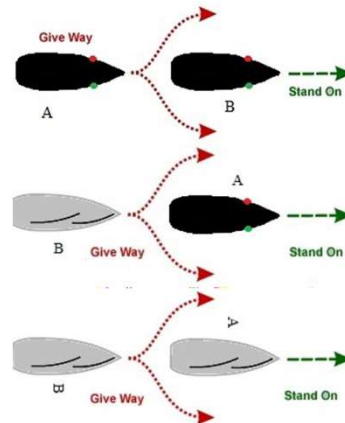
➤ B and C

Note: all four vessels are in the overtaking sector, but only B and C are approaching



Overtaking

- RULE: When one vessel is overtaking another, the overtaking vessel must give way
- IMPORTANT – The rule is the same for sail vs. sail, sail vs. power and power vs. power. The overtaking boat must give way.





Summary

- **Remember the common sense principles underlying right of way rules: Keep a good lookout, be prepared to take early action to avoid collisions and act prudently and defensively.**



Summary

- Remember the common sense principles underlying right of way rules: Keep a good lookout, be prepared to take early action to avoid collisions and act prudently and defensively.
- **Remember that an underlying theory of right of way rules is to give way to less maneuverable vessels.**





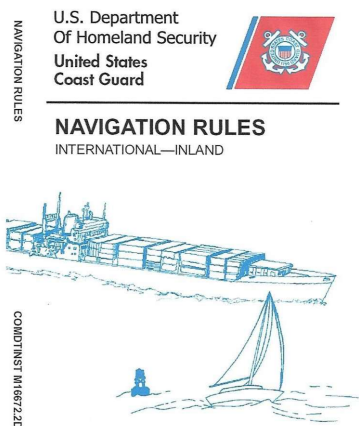
Summary

- Remember the common sense principles underlying right of way rules: Keep a good lookout, be prepared to take early action to avoid collisions and act prudently and defensively.
- Remember that an underlying theory of right of way rules is to give way to less maneuverable vessels
- **Study and understand the basic rules for sail vs. sail, sail vs. power, power vs. power and overtaking.**



Part 2: Aids to Navigation – “ATONS”

- On our day sails we encounter a colorful assortment of buoys and other markers.
- This unit introduces the basic types of ATONs and their meaning



Types of markers: Buoys

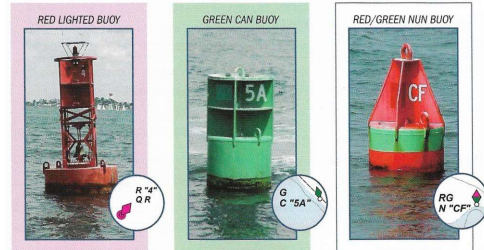
Buoys

Float on the surface, moored to the bottom

Some have lights, some do not

Three basic shapes:

- Buoy
- Can buoy
- Nun buoy



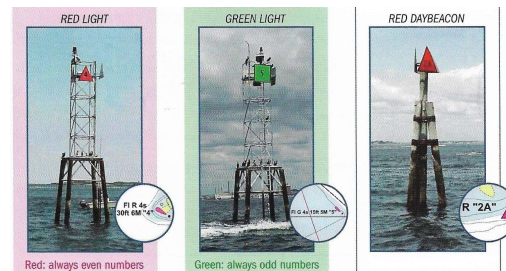
Types of markers: Lights and beacons

Lights

A light permanently fixed to the bottom or a jetty

Daybeacons

Beacons without a light



A Field Guide to Dana Point ATONs















Informational ATONs: hazards and restrictions

White and orange markers warn of danger, mark restricted areas and even tell you where to fuel up.



Information and Regulatory Marks

These orange-and-white Aids are used to alert vessel operators to various warnings and regulations.

Symbol	Meaning	Examples
	Danger A diamond shape alerts boaters to hazards	 
	Restricted Operations Marks with a circle indicate areas with regulated operations	 
	Exclusion A diamond shape with a cross means boats are prohibited from the area	 
	Information Marks with a square provide helpful information such as directions, distances, and locations	 













Characteristics

- White with an orange horizontal band at both top and bottom.
- Black text within or around an orange square, circle, or diamond; or black text outside a diamond with an orange cross.
- May be buoys or beacons.



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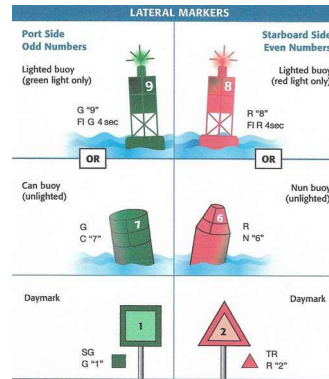
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Lateral Markers

These ATONs indicate the port and starboard side of the channel **when entering the channel from outside the harbor**. These may be buoys, cans or daymarks.

GREEN markers (with odd numbers) indicate the port side of the channel
RED markers (with even numbers) indicate the starboard side of the channel



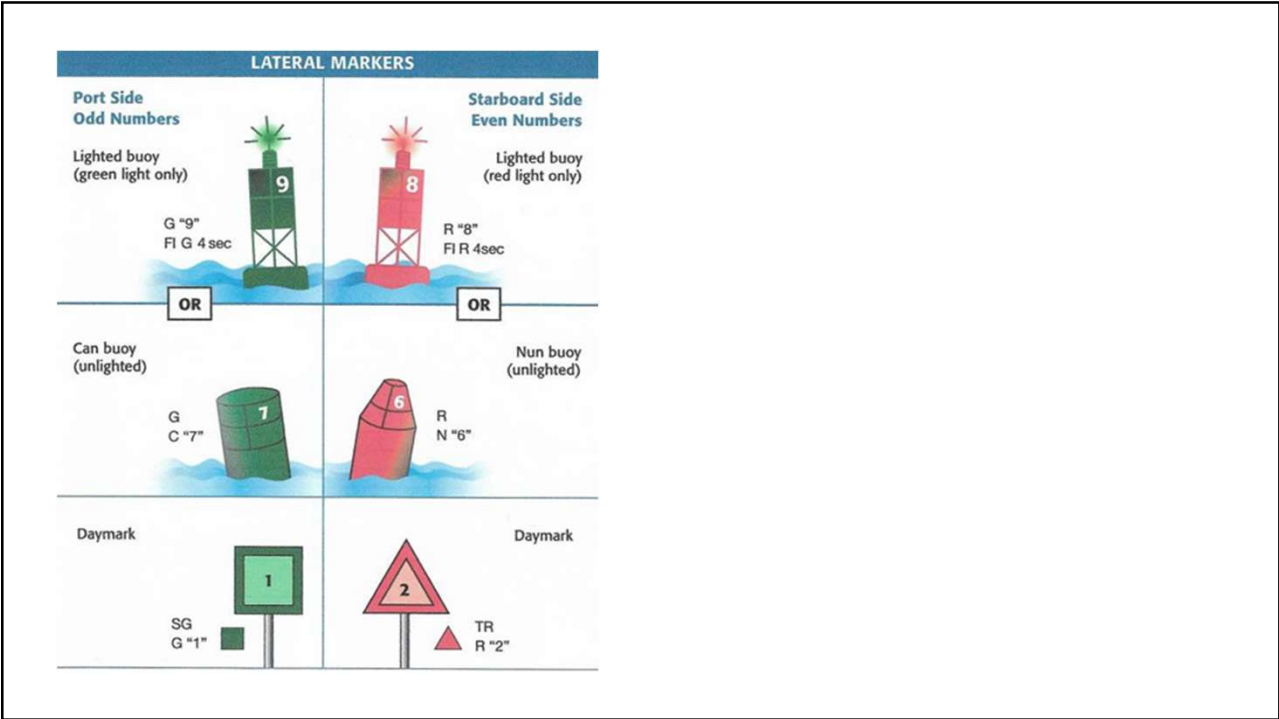
Lateral Markers







When entering the harbor, remember the “three rs” of navigation.


RED, RIGHT, RETURNING







That is, keep the red markers to your right when returning to the channel from the open ocean.


(Note: this applies in North America, Central America, South America, the Philippines, Japan and Korea. The reverse applies in Europe, Australia, New Zealand, parts of Africa and most of Asia.)










LATERAL MARKERS	
<p>Port Side Odd Numbers</p> <p>Lighted buoy (green light only)</p>  <p>G "9" Fl G 4sec</p> <p>OR</p>	<p>Starboard Side Even Numbers</p> <p>Lighted buoy (red light only)</p>  <p>R "8" Fl R 4sec</p> <p>OR</p>
<p>Can buoy (unlighted)</p>  <p>G C "7"</p>	<p>Nun buoy (unlighted)</p>  <p>R N "6"</p>
<p>Daymark</p>  <p>SG G "1"</p>	<p>Daymark</p>  <p>TR R "2"</p>










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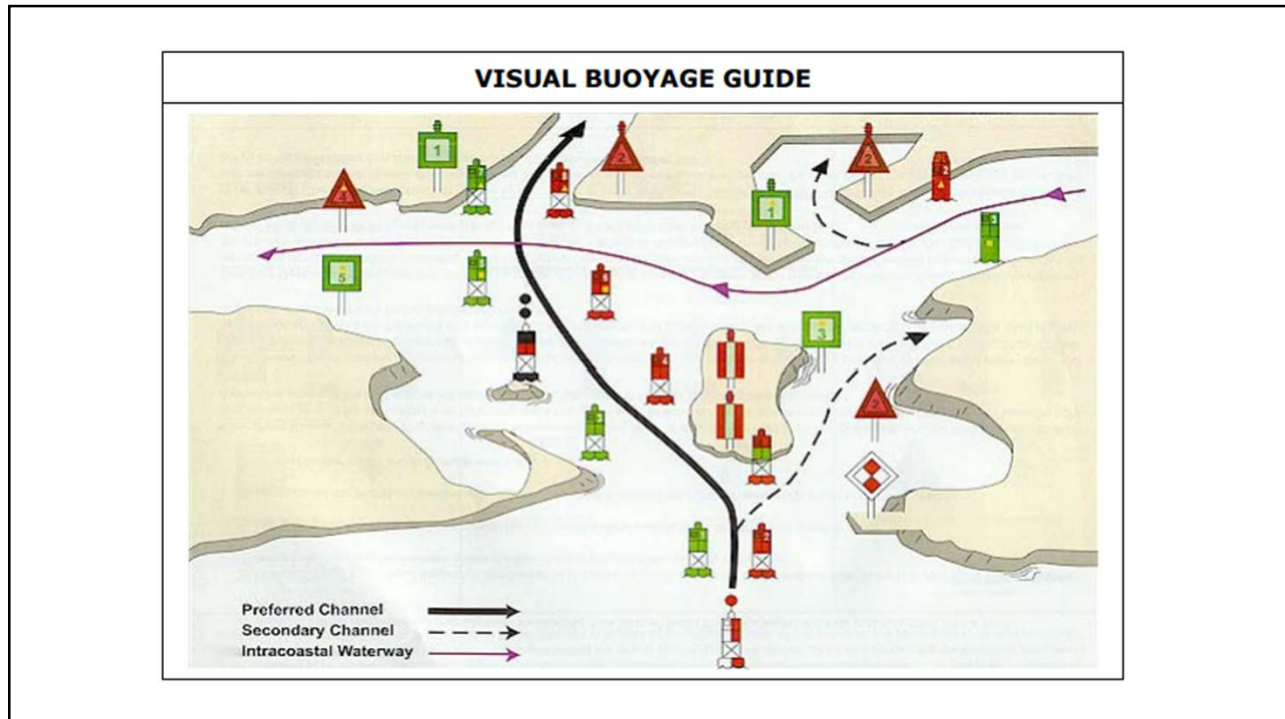


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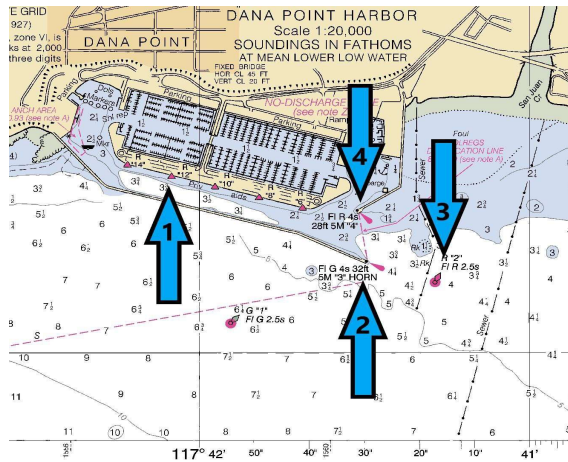


Aids to Navigation (ATONs)



<https://www.youtube.com/watch?v=re9t6n63rtU>

Match the numbered ATON with its name:



Red buoy

Red jetty light

Green jetty light

Daymarker



For further study

➤ Review *Sailing Made Easy* pp. 92-95

➤ ASA Sailing Challenge App



➤ International Regulations for Preventing Collisions at Sea

<https://www.navcen.uscg.gov/pdf/navRules/navrules.pdf>

➤ US Naval Academy Guide to Navigation Rules

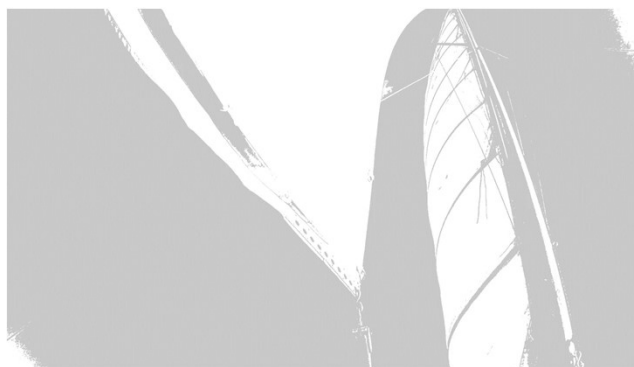
https://www.usna.edu/Sailing/files/documents/2019_OSTS_Documents/ROR.pdf



Knot Lesson

Coiling a Line

Coiling a Line



<https://www.youtube.com/watch?v=K1leinSxL8E>

On the Water Sessions

- March 11 Skipper – Darrel Vorderstrasse
- March 18 Skipper – Jack Dunnigan – **Postponed**
- March 25 Skipper – Pat Rojek
- April 1 Skipper Darrel Vorderstrasse
- **April 8 Skipper – Jack Dunnigan**

Homework for Next Week

- Complete the interactive Final Exam
 - https://gewa.gsfc.nasa.gov/clubs/sailing/BASIC_SAILING_CLASS/class/exam_interactive.html
 - Open book
 - Come prepared to discuss at March 27 class