

Slide 01

August 15 2011

**April 18,2008
First Revision**

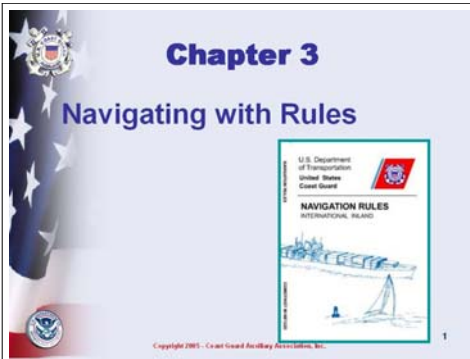
August 15, 2011

**Text converted to Tables for ease of formatting
instructor guide.**

**Slide 23 Sound Signals
Corrected Danger Signal – 5 or More Short Blasts**

**August 15, 2011
Added slide 26 – Sound Signals – Maneuvering
Maneuvering Circle**

ABC Chapter 3 Part 1 Tables



Slide 02

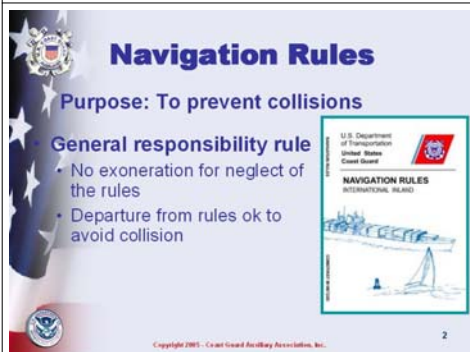
This chapter is designed for people who have small boats used in protected waters. The aids to navigation information is not all-inclusive for that reason. If other types of navigation aids are used in your boating area, by all means discuss them with the students.

The light configurations displayed in this chapter are those commonly found on small recreational boats. If your area has large commercial traffic, by all means include light configurations that the boaters in your area might see.

Colregs / Farwells / Self Certifying

Did You Drive Here??

We will cover a Subset of Common Rules Today



Slide 03

Ask: What are the Navigation Rules and what are they for?

How we operate vessels in situations where risk of collisions exists

Only to Prevent Collisions between 2 Boats

If a Collision Occurs C.G. Assumes the Rules were not Followed

When did the rules start

Discuss the General Responsibility Rule

The Rule of Good Seamanship – Follow the Rules

2(a) Nothing in these Rules shall exonerate any vessel, or the owner, master or crew thereof, from the consequences of any neglect to comply with these Rules or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

The General Prudential Rule – Be Prudent Must Depart from the Rules When Required

2(b) In construing and complying with these Rules due regard shall be had to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels involved, which may make a departure from these Rules necessary to avoid immediate danger.

ABC Chapter 3 Part 1 Tables



Slide 04

Before bullet points are animated

Ask: What three Rules help prevent collisions?

Ask:

What is “Good Seamanship”?

What is a proper lookout?

What is the speed limit for boats in your local waters?

How would you determine what a safe speed” is?

Response: weather, crew, kind of boat, experience, other boats around, traffic, visibility,

Rule 5: Every vessel shall **AT ALL TIMES** maintain a proper look-out by sight and hearing as well as **BY ALL AVAILABLE MEANS APPROPRIATE** in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

Good Seamanship: The use of Superior Judgment to avoid situations where Superior Skills are needed. (Puget Sound Pilots)

Only 1 Person on board

Everyone below while boat drifts

(whoopee & lunch)

Lookout: That is the only thing that person does.

Night: Driver concentrating on water.

Heavy Traffic: Extra help needed.



Slide 05

Ask Why do we need Driving rules?

And the Nautical communication system now?

These rules are very old. Goes back to the beginning of the US government, 1790's, boats were colliding with each other in the harbors

Why does it apply to everyone who is on the water?

Steering and Sailing Rules Apply to any Condition of Visibility

1(a) These Rules shall apply to all vessels upon the high seas and in all waters connected therewith navigable by seagoing vessels. (also Inland waters of the United States)

ABC Chapter 3 Part 1 Tables



Navigation Definitions

- 1 • **Power driven** - vessel propelled by machinery
- 2 • **Sailing** - vessel under sail (if engine is used it is a power vessel)
- 3 • **Underway** - not anchored, not attached to shore, a pier, or aground
- 4 • **Constant bearing decreasing range** - this is a collision course

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Slide 06

These help to understand the navigation rules
Add your own description of these navigation definitions

Could ask What are the requirements of being a sail boat?

Do the people in a boat that is floating in the water, engine off (can be started easily), have to follow the Nav rules? And why?

Constant Bearing Decreasing Range – In a Car.



Meeting Other Boats

- 1 Give way vessel – required to change course and speed
- 2 Stand on vessel – must maintain course and speed
- 3 When do these apply?

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Slide 07

Give way vessel:

Required to change course and speed

Early & Obvious

Stand on vessel:

Must maintain course and speed

Until obvious the vessel required to keep clear is not taking appropriate action.

When do these apply?

Situation: head-on, crossing, overtaking

Types of boats: sail or power

Demonstrate the 3 situations of meeting – using “bag boats” or other

Discuss: that a sailboat with it’s engine running, either with or without sails raised, is considered by the Nav Rules to be a power-driven vessel

17(a) (i) Where one of two vessels is to keep out of the way, the other shall keep her course and speed.

(ii) The latter vessel may, however, take action to avoid collision by her maneuver alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action in compliance with these Rules.

Not required to take Privilege – But must give up early and obvious

What is Maintaining Course & Speed? Examples

USS Arthur W. Radford vs. The Saudi Riyadh

Vessel following turns in VTS

Vessel following a channel

North entrance to Shilshole Marina

ABC Chapter 3 Part 1 Tables



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Ask: How does understanding the hierarchy help you to interact with other boat?

This is part of the Nav rules, certain boats have priority over others

Have Hierarchy on flash cards. Hand out to 5 people and have them arrange themselves

NUC: Through Exceptional Circumstances

RAM: By the Nature of her Work

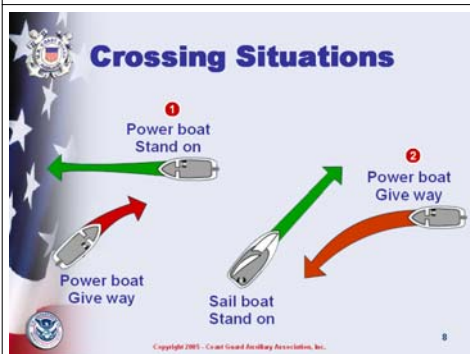
Fishing: Fishing with nets, lines, trawls or other fishing apparatus which restrict maneuverability, but does not include a vessel fishing with trolling lines or other fishing apparatus which do not restrict maneuverability.



Slide 09

Before animating the slide:

Ask: If two powerboats are meeting head on, which one is the give way vessel? If one is a sailboat, which gives way?

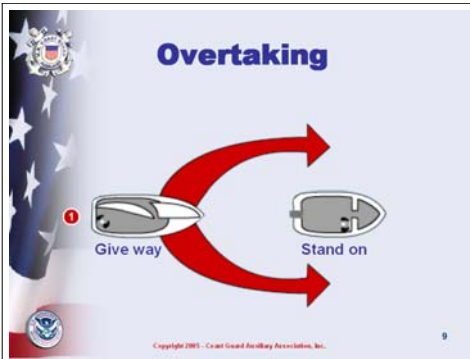


Slide 10

Before animating slide:

Ask: If two powerboats are crossing, which one gives way? If one is a sailboat, which gives way?

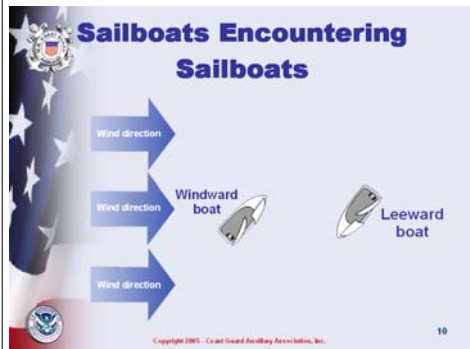
ABC Chapter 3 Part 1 Tables



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Before animating slide:

Ask: Who gives way when one boat overtakes another?
If one is a sailboat, which gives way?



Slide 12

Discuss that sailboats under sail have certain rules that can be remembered by the acronym "SLO"

Starboard

Leeward

Overtaken (same as powerboats)

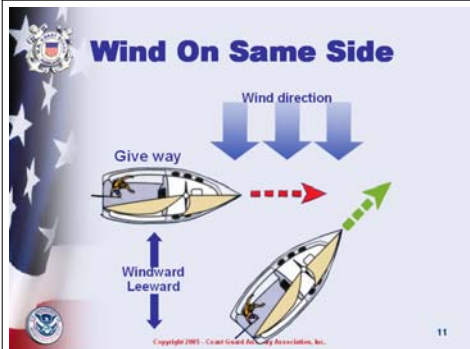
We'll illustrate

Powerboats: why should you understand Sailboat Rules??

Which Tack? Most people think side the wind is coming over.

Rules: Side opposite the boom is carried on.

Can you be on Port tack and have the wind on the Starboard side?

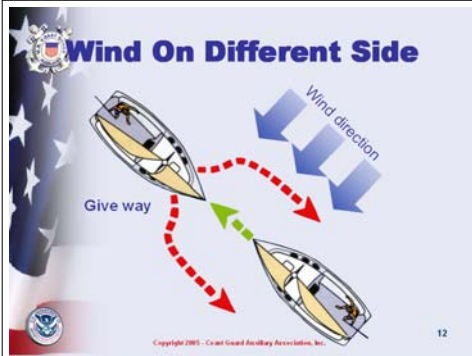


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ASK: Which boat maintains course and speed?

With the wind on the same side, the sailboat to Leeward (Downwind) stands on

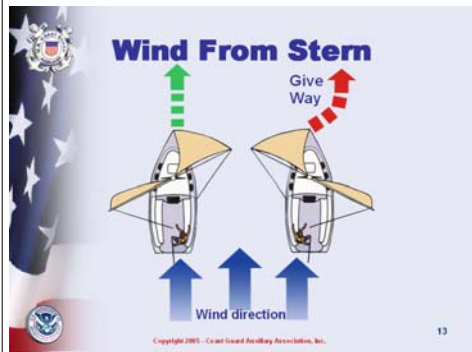
ABC Chapter 3 Part 1 Tables



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ASK: which boat maintains course and speed?

The boat on the Starboard tack is the stand on vessel.



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ASK: which boat here maintains course and speed?

The boat with the boom over to port (Starboard Tack) is stand on

Classroom aid: use model boats to have students demonstrate meeting, crossing and overtaking situations

ABC Chapter 3 Part 1 Tables



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Two boats approaching each other @ 40 kts

Perfect Visibility

**Masthead at 1.5 min.
Sidelights at 45
seconds**

**A boat @ 40kts approaching a
stopped boat in the water:**

Perfect Visibility

**Masthead at 3.0 min.
Sidelights at 1.5 min**

**Large Freighter approaching
at 22 kts**

**Masthead at 16 min.
Sidelights (direction) at
8min**

Before animating slide:

Ask: Why do boats have lights?

To identify the type of boat

To identify which boat is stand on and give way.

To identify which way the boat is going

Ask: What are the colors and names of the lights you need?

Teaching aid: Use black felt board with round colored pieces of felt

Discuss arc of visibility for each.

Point out that sailboats under sail do not display a masthead light.

Side lights

Red and green seen at front of boat

Stern lights

White seen at rear of boat

Masthead light

White seen from forward and sides

All round white light

Seen from all directions

No other lights are allowed on the boat at night.

Not allowed lights not legally entitled to or lights that can be confusing to another vessel.

20(b) The Rules concerning lights shall be complied with from sunset to sunrise, and during such times no other lights shall be exhibited, except such lights as cannot be mistaken for the lights specified in these Rules or do not impair their visibility or distinctive character, or interfere with the keeping of a proper look-out.

Visibility of Lights:

Under 12 meters (39.4 ft)

Masthead, 2 miles – Sidelight 1 mile

= / >12 meters but < 50 meters (39.4 ft 164 ft)

Masthead 5 miles unless < 20 m then 3 miles

Sidelights, 2 miles

50 meters or more

Masthead light 6 miles

Sidelights 3 miles

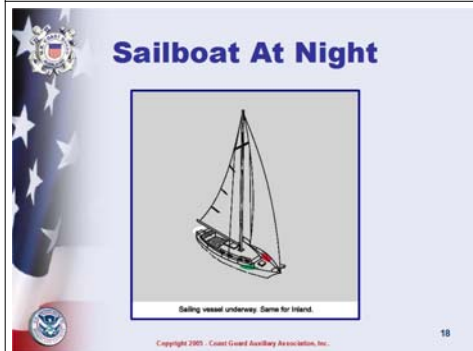
ABC Chapter 3 Part 1 Tables



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Remind all that a flashlight should be aboard all boats.

For paddle boats a flashlight is all that is required at night



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Slide 19

Before bullet points are animated:

Ask: What is unique to a sailboat's lights? How do you know it is a sailboat?

Green or red only observed

May be a sailboat under sail

Give way

Sailboat under sail only

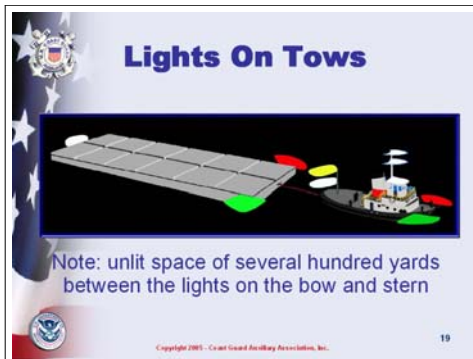
Always stand-on except when overtaking



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Some possible powerboat-sailboat situations. Discuss how the give way vessel is determined from the lights

ABC Chapter 3 Part 1 Tables

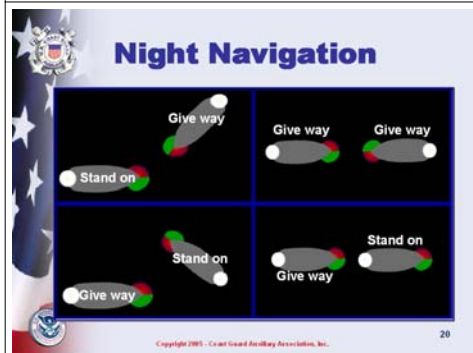


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Emphasize that there may be many yards between the vessel towing and being towed and the danger of crossing between the two.

Point out the two or three white masthead lights, indicating a vessel towing.

Many barges trail a floating line behind the barge that can be used to pickup a secondary tow line if the main tow line breaks. Don't pass too close or you can get hung up on the line.



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Ask: students to tell why each of those is stand on or give way.

Or use felt board and round pieces of felt



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Discuss these night boating safety precautions

Dim lights to save night vision

Red Flashlight for reading charts etc.

Have a Bright Flashlight on board – warn other vessels – Help – see stuff in water – help at dock.

Never shine a light into the eyes of another boat – blind the other helm.

Rule 36 –may direct the beam of her searchlight in the direction of the danger, in such a way as to not embarrass any vessel.



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ASK: the question on the slide

We use sound signals to alert other boats to:

Our intentions

Identify our boat type and position in restricted visibility

Signal Danger or Confusion.

Signal Bridges for Opening.

ABC Chapter 3 Part 1 Tables

Sound Signals

- 1 Short blast: about one second long
- 2 Prolonged blast: 4 to 6 seconds
- 3 Danger Signal: 5 or more short blasts
- 4 Blind bend or corner: 1 prolonged blast

Let Other Boaters Know Where You Are

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ASK: what is a prolonged and a short blast?

Short Blast : About One Second Long

Prolonged Blast : 4 to 6 Seconds

No “Long Blast”

Sound Signal
(Maneuvering)

- 1 Inland Rules
 - Signals indicate intent
 - Require an answer of agreement
- 2 International Rules
 - Signals indicate execution
 - No response required unless danger

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Classroom aid: use model boats and have students demonstrate proper sound signals

Classroom aid: “Port” has one syllable. One blast means, “I’m passing you on MY PORT side (I’m turning to starboard)”

**International Rules Exception –
Narrow Channel INTENT**

P - P - S – Overtake on your Stbd side

P – P – S – S – Overtake on your Port side

P – S – P – S – OK

Sound Signal
(Maneuvering - International)

Altering Course to Port: S S

Altering Course to Starboard: S

Operating Astern Propulsion: S S S

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International – Signal and Go

No response required unless Danger

S – Altering Course to Starboard

S – S – Altering Course to Port

S – S – S – Operating propulsion astern (reverse)

S – S – S – S – S (or more) - Danger / No

ABC Chapter 3 Part 1 Tables



Sound Signals
(Restricted Visibility)

Restricted visibility is when a boat is not in sight because of fog, rain, snow, etc.

1 What will a powerboat underway sound?

2 A sailboat?

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ASK: questions on slide

Sound Signals in Restricted Visibility
Let Other Boaters Know What and Where you are

Discuss any other sound signals common to your boating area.

Ferry leaving slip – Prolonged –

Seattle - Local Custom. Not required for International Rules.

Ferry leaving slip – Three Short (Operating Astern Propulsion) –

San Juan Islands - Local Custom. Not required for International Rules.

Power Making Way P @ 2 min

Power Not Making Way P – P @ 2 min.

Sailboat P – S – S @ 2 min.

P – S – S @ 2 min. ALSO -

Not Under Command

Restricted in Ability to Maneuver

Constrained by Draft (International only)

Fishing

Fishing at Anchor

Towing

Pushing

Note the time is “INTERVALS OF NOT MORE THAN”

**Vessel being towed is manned P – S – S – S @
2 min match towing vessel if practicable**

ABC Chapter 3 Part 1 Tables



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<http://www.uscg.mil/d13/units/vts/RecPamphlet4.htm>

Rule 10

Hand out the VTS pamphlet from USCG VTS at pier 36

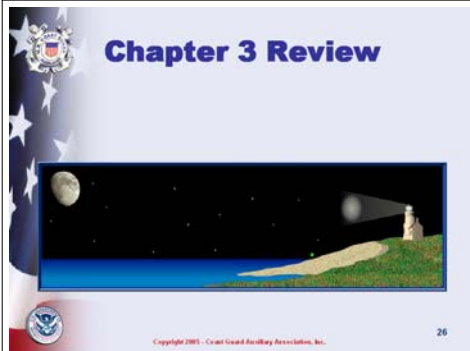
Design a slide for rule 9 on the Columbia & other rivers

Cross VTS lanes at Right Angle

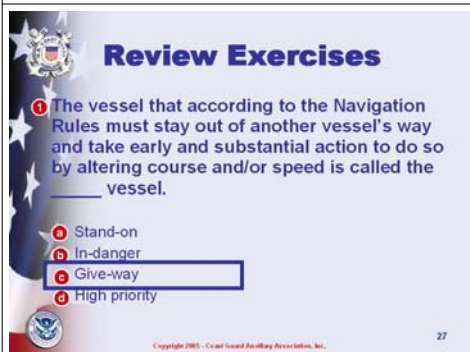
Enter or leave lanes at a small angle

10(j) A vessel of less than 20 meters in length or a sailing vessel shall not impede the safe passage of a power-driven vessel following a traffic lane.

Freighter – 22 / 24 kts - Kingston Turning Buoy to Shilshole = 10 MINUTES

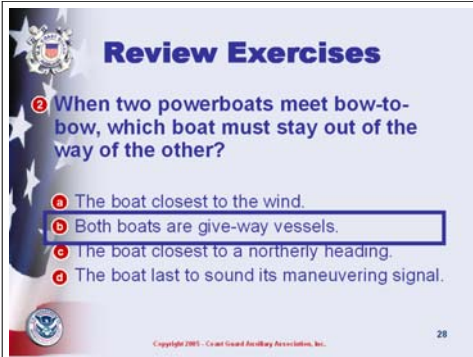


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ABC Chapter 3 Part 1 Tables



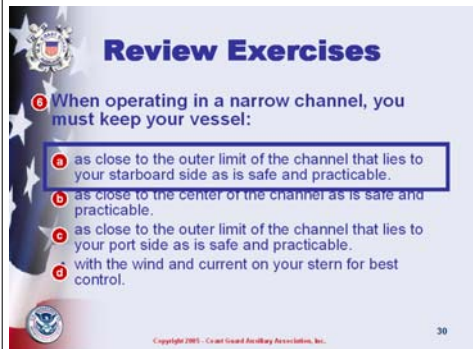
Review Exercises

2 When two powerboats meet bow-to-bow, which boat must stay out of the way of the other?

- a The boat closest to the wind.
- b Both boats are give-way vessels.
- c The boat closest to a northerly heading.
- d The boat last to sound its maneuvering signal.

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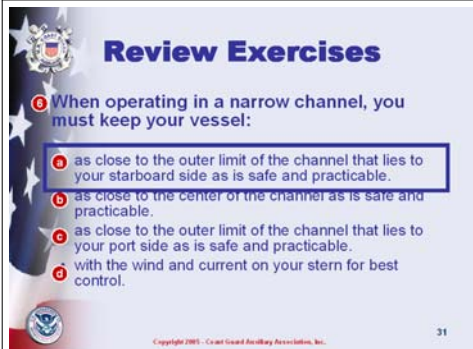
Review Exercises

6 When operating in a narrow channel, you must keep your vessel:

- a as close to the outer limit of the channel that lies to your starboard side as is safe and practicable.
- b as close to the center of the channel as is safe and practicable.
- c as close to the outer limit of the channel that lies to your port side as is safe and practicable.
- d with the wind and current on your stern for best control.

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Review Exercises

6 When operating in a narrow channel, you must keep your vessel:

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- d with the wind and current on your stern for best control.

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Review Exercises

8 A sailboat with sails raised and operating using engine power is a:

- a vessel not under command.
- b vessel restricted in her ability to maneuver.
- c fast vessel.
- d power-driven vessel.

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Review Exercises

10 If you see two white masthead lights in a vertical line, you should be prepared to take action because you are meeting a:

- a surfaced submarine.
- b large sport fisherman.
- c vessel towing or pushing ahead.
- d night-time sail race.

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Review Exercises

11 The signal used when you do not understand the other boater's intentions is:

- a 1 short blast of the whistle.
- b 5 or more short and rapid blasts of the whistle.
- c shouting "danger!" as loudly as possible.
- d rapid and constant waving of the arms.

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Review Exercises

11 The signal used when you do not understand the other boater's intentions is:

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Review Exercises

12 While operating in a thick fog, you hear one prolonged blast every 2 minutes. You proceed slowly and watch for a _____.

- a vessel not under command.
- b vessel engaged in fishing.
- c sailing vessel underway.
- d powerboat underway making way.

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ABC Chapter 3 Part 1 Tables

	<p>Any Questions?</p>