

Cal Sailing Club SENIOR and CRUISING WRITTEN TEST

January 23, 1991 (updated March 12, 2013)

You will need the following equipment to take this test:

Chart of central San Francisco Bay (18649 or 18652)
Course Plotter
Pen or pencils and eraser
Tide book for any year (for current charts and tidal difference tables)
Tide and current tables for 1990, which can be found at
<http://tides.mobilegeographics.com/calendar/year/5546.html?y=1990&m=1&d=1>
and
<http://tides.mobilegeographics.com/calendar/year/2194.html?y=1990&m=1&d=1>

A non-programmable calculator may be used, although the problems are designed so that a calculator is not required.

No other materials, notes, or publications are permitted

The test is closed book (except for the chart, tide book and tide tables), and must be completed in one sitting without assistance of any kind.

PASSING SCORE: 85%

SAILING THEORY AND PRACTICE

1) Which of the following will **not** increase weather helm?

Tightening the backstay
Increasing heel angle
Loosening the outhaul
Over-trimming the mainsail

2) On a Commander, which of the following will have the greatest effect on weather helm?

Raking the mast 4 inches at the tip
Heeling the boat another 20°
Moving the jib lead forward by two holes
Steering from the other side of the cockpit

3) What is the primary function of a boom vang?

Tighten the luff of the mainsail
Flatten the mainsail
Reduce the twist of the mainsail
Reduce the possibility accidental jibes
Reduce weather helm

4) What is the primary function of a mainsheet traveler?

Reduce load on the mainsheet
Allow the boom to be let out without reducing load on the mainsheet
Reduce weather helm
Increase the mechanical advantage of the mainsheet

5) What is the primary function of the forestay on a JY-15?

Holding the mast up when the jib is down
Keeping the luff of the jib straight
Controlling the amount of mast rake
Raising and lowering the mast
Preventing the spinnaker pole from swinging to the leeward side

6) What is the primary function of a foreguy?

Holding the boom forward while sailing wing-and-wing
Pulling the middle of the mast forward to increase mast bend
Pulling the middle of the mast forward to prevent mast inversion
Pulling the spinnaker pole forward and down

7) The rudder of a dinghy will be more effective for sculling if:

The centerboard is raised half-way.
The centerboard is raised all the way.

the boat is trimmed down by the stern.
The rudder is raked aft.

8) What is the purpose of a spring line?

Restricting fore-and-aft movement of a boat tied to a dock.
Changing the lead angle of the jib.
Preventing accidental jibes.
Mooring a boat during the months of April, May, or June.
Recovering beverages that have been lowered into the water to keep them cool.

9) A good way to anchor a Commander in a precise position in a crowded anchorage in strong wind is:

- a) Luff into the wind with both sails up, drifting to a complete stop at the spot where you want the anchor. Lower the anchor over the bow, and sail backwards until the anchor holds.
- b) Slow-sail on a close-hauled course, lower the anchor over the windward side when you are at the desired spot, and keep sailing until the anchor is set. Then lower the sails and transfer the rode to the bow.
- c) Heave-to over the spot you want to anchor at, and throw the anchor to windward. Then lower the sails.
- d) Sail upwind of the spot you want the anchor, and lower both sails. Lower the anchor over the stern as you drift downwind under bare poles, and after the anchor is set, transfer the anchor rode to the bow.

10) Which action is *not* usually a part of reefing a CSC Commander?

Loosen the boom vang.
Lower the halyard.
Tighten the reef outhaul.
Tighten the reef cunningham.
Tie the reef lines around the sail, but not around the boom.
None of the above - all actions listed should be part of reefing.

11) If you are having difficulty feeding the bolt rope of the sail into the mast groove while unreefing a mainsail, what adjustment might help?

Loosen the boom vang.
Loosen the reef outhaul.
Loosen the outhaul.
Loosen the mainsheet.
All of the above.

12) What would be the safest way to sail a Laser Bahia from Emeryville back to the CSC dock if the wind suddenly came up from the north at 40 knots?

Reefed main and jib
Reefed main only
Jib only
Bare poles

13) If the top of a jib luffs before the bottom, you should make what adjustment?

Tighten the halyard
Move the jib lead outboard
Move the jib lead aft
Move the jib lead forward
No adjustment required - the top of the jib should luff first.

14) When coiling halyard tails on CSC boats:

Start at the cleat and coil towards the end.
Start at the end and coil towards the cleat.
Always coil clockwise.
Always coil counter-clockwise.

15) How much chain is usually required on a 12-pound Danforth type anchor?

none
one foot
five feet
20 feet

16) What kind of rope is best for dock lines?

hemp
polypropylene
nylon
dacron
kevlar
neoprene

READING THE TIDE BOOK

17) At what time does the tide begin to flood at the entrance to the Oakland Estuary on May 12, 1990?

11:49 AM
12:08 PM
8:39 AM
8:20 AM

18) What time is high tide at the Petaluma River Drawbridge on July 1, 1990?

8:21 AM
8:28 AM
10:31 AM
6:11 AM

19) How high is the high tide at Petaluma River Drawbridge on July 1, 1990?

3.4 feet
0.7 feet
4.1 feet
2.7 feet

20) How strong is the tidal current between Alcatraz and the cityfront at 12:30 PM on October 28, 1990?

0.8 knots
1.0 knots
1.2 knots
1.6 knots

21) What time is sunset on December 23, 1990?

6:55 PM
4:55 PM
7:23 PM
5:23 PM

CHART READING, COURSE PLOTTING, AND PILOTING PROBLEMS

22) Which compass rose on the chart should be used to determine a compass course?

The outer compass rose.
The inner compass rose.
Neither - compass courses are determined by means of a pelorus.
Either one - they give the same result.

23) What is the approximate value of magnetic variation for San Francisco Bay?

14° easterly
14° westerly
15° easterly
15° westerly
16° easterly
16° westerly

24) What kind of information can be found in chart no. 1?

A catalog of nautical charts.
A list of buoys and lights for all U.S. coastal waters.
The Coast Guard regulations for running lights.
A list of symbols and abbreviations used on charts.

25) You suspect that the compass on the boat you are sailing has not been adequately compensated for deviation. Which is the LEAST accurate way to

check the compass?

- a) Steer a straight course between two nearby charted objects, and compare the average compass course steered with the course determined by course-plotter from the chart. Repeat at various headings.
- b) Sail to a charted object, and aim the boat at a distant charted object. Compare the compass reading with the bearing determined by course-plotter from the chart. Repeat at various headings.
- c) In the morning or afternoon when the sun's angle is low, aim the boat directly at the sun and note the compass reading and the time. Then compare with the calculated compass bearing to the sun. Repeat with the sun astern and abeam.

26) What color is the flashing light on Point Blunt?

27) What would you expect to find written on the buoy marking Harding Rock?

R G
R G "HR"
HR
R G "HR" Fl (2+1) R 6s
Kilroy was here

28) What color is the light on the Harding Rock buoy?

29) What color is the light marking Anita Rock?

30) What color is the buoy located about half a mile off Point Chauncey (on the north shore of Tiburon)?

31) What is the characteristic of the light on this buoy?

It is a motor-driven rotating beacon.
It is modulated, and flashes on and off at equal intervals.
It flashes once every four seconds.
It flashes one short and one long every few seconds.
It is a white beacon, motor driven, type "a".
There is no light on this buoy.

32) When entering a harbor, which side should the red buoys be left on?

Left side.
Right side.
Depends on whether the harbor entrance faces east or west.
Either side - red buoys are mid-channel markers.

33) What is the height above the terrain of the light on Alcatraz?

21 meters
40 feet
69 feet
214 feet
Height above the terrain is not indicated

34) What is the height above sea level of the light on Alcatraz?

21 meters
40 feet
69 feet
214 feet
Height above sea level is not indicated

35) What is the compass course from Quarry Point to the Main entrance to the Berkeley Marina? (neglect tidal current)

66°
72°
82°
88°
246°
252°

36) How long would it take to sail between these two points at a speed of four knots? (neglect tidal current)

Less than one hour.
About one hour.

About one hour and ten minutes.

About one hour and twenty minutes.

37) It is August 21, 1990, at 6:30 PM. You are at the buoy off Point Knox in a CSC Commander. There is thick fog in the central bay, and the wind speed and direction are typical for a foggy summer evening. You would like to sail across to Aquatic Park. What factor should you use to correct the charted current speed?

- 0.4
- 0.8
- 1.1
- 1.6
- 2.0

38) What is the approximate average speed of the current you will encounter?

- 1.2 knots
- 1.6 knots
- 2.0 knots
- 2.4 knots

39) What compass course should you steer to sail to Aquatic Park?

- 125°-130°
- 135°-140°
- 145°-150°
- 155°-160°
- 165°-170°

40) What is the distance you will sail *through the water* to reach Aquatic Park?

- 2.7 nautical miles
- 2.8 nautical miles
- 2.9 nautical miles
- 3.0 nautical miles

41) At approximately what time would you expect to reach Aquatic Park?

- 6:50
- 6:55
- 7:00
- 7:05

42) It is November 14, 1990, at 7:00 PM. You are just off the north-west corner of Treasure Island in a CSC Commander, and the wind is eight knots from the north-west. What landmark could you steer for to sail a course that would take you just clear of the end of the Berkeley Pier?

- Albany hill
- The Radio towers at Point Isabel
- Brooks Island
- Point Richmond

43) You are somewhere in the bay, and take the following bearings with a hand-bearing compass: Top of Angel Island - 228°. Top of Brooks Island - 38°.

What course would you steer to sail to the end of the Berkeley Pier?

- 110°
- 112°
- 119°
- 129°
- 135°

44) About how deep is the water at the location from which you took the bearings? (assume tide height = 0.0)

- 6 ft.
- 8 ft.
- 10 ft.
- 12 ft.
- 22 ft.
- 44 ft.

45) What is one possible problem with these bearings?

- a) There are only two bearings. Three are required for a fix.
- b) The crossing angle of the bearings is too low for best accuracy.
- c) The bearings are not corrected for magnetic variation.
- d) The bearing targets are not precise points.
- e) The bearings are not adjusted for the distance the boat may have traveled in the time between the first bearing and the second.

LOCAL KNOWLEDGE

46) Where would you expect to find the most wind on a summer afternoon?

- Southampton Shoal
- Point Blunt
- Point Bonita
- Quarry Point

47) Where would you expect to find the least wind on a summer afternoon?

- Southampton Shoal
- Point Blunt
- Point Bonita
- Quarry Point

48) Which set of bearings can be used to accurately locate Ashby Shoal?

- a) Camponile in front of the Cyclotron dome, and Hs. Lordships Restaurant appearing just to the left of Albany Hill.
- b) Camponile in front of the Cyclotron dome, and Point Richmond visible through the break in the pier.
- c) Yerba Buena in front of the Ferry Building, and Brooks Island visible through the break in the pier.
- d) Between Emeryville channel marker #1 and Hs. Lordships restaurant, and due west from Ashby overpass.

49) How many safe passages are there through the Berkeley Pier?

- None
- One
- Two
- Three
- More than three

50) It's open house on Saturday January 6, 1990. At what time would you expect to be able to sail a Commander to the CSC dock without running aground? (Use the current water depth at the CSC dock, not the depth we had in 1990.)

- Not until 3:00 PM
- Not until 4:00 PM
- Not until 5:00 PM
- Not until 6:00 PM
- Not until 7:00 PM
- Not until 8:00 PM

51) When there is strong ebb tide in Raccoon Strait, in what direction will the tidal current be flowing in Ayala Cove?

- The current is negligible
- Towards the south-west
- Towards the north-east
- Clockwise
- Counterclockwise

CAL SAILING CLUB RULES AND PROCEDURES

52) What is the time limit for daysailing a CSC keelboat?

53) What is the maximum number of people allowed to sail on each of these CSC boats by the CSC operating rules?

- Laser Bahia
- JY-15
- Pearson Commander
- Merit 25

Capri 25

54) What is the minimum number of people allowed to sail on each of these CSC boats by the CSC operating rules?

Laser Bahia
JY-15
Pearson Commander
Merit 25
Capri 25

55) Describe the western boundary of the Senior Keelboat Daysailing area.

56) Describe the southern boundary of the Senior Keelboat Daysailing area.

57) Describe the western boundary of the Senior Dinghy Daysailing Area.

58) Describe the northern boundary of the Senior Dinghy Daysailing Area.

59) Describe the western limit of the Cruising Area.

60) When are life jackets required to be worn by passengers or crew on a CSC keelboat?

Never
Only non-swimmers must wear life jackets
Only when on the foredeck, and by non-swimmers at all times.
At all times when the boat is underway.

61) Where must cruise plans be filed immediately before departing on a CSC cruise?

With the dayleader
With the CSC Cruise Chair
With the Berkeley Harbormaster's office
With the Coast Guard district office

62) What will happen if you fail to close your cruise plan on your return?

You will be suspended by your thumbs from the highest yardarm
You will be keelhauled
You will receive forty lashings
You will be clapped in irons and put in the brig
All of the above

LIGHTS, SIGNALS, AND NAVIGATION RULES

63) Which of the following vessels has right-of-way over all the others?

A windsurfer
A rowboat
A sailboat under sail
A recreational powerboat
A large commercial vessel in San Francisco Bay

64) If you are directly abeam and on the port side of a boat under sail, which running lights should be visible?

Green only
Red only
Green and white
Red and white

65) If you are directly abeam and on the port side of a boat under power, which running lights should be visible?

Green only
Red only
Green and white
Red and white

66) What lights are required to be shown by a CSC Laser Bahia at night?

None.
Flashlight displayed in time to prevent a collision.

Combination red and green running light.
Separate red and green running lights.
Red and green running lights, plus a white stern light.

67) What lights are required to be shown by a CSC Merit 25 at night?

None.
Flashlight displayed in time to prevent a collision.
Combination red and green running light.
Separate red and green running lights.
Red and green running lights, plus a white stern light.

68) What do these lights indicate?

*** white**
*** white**
*** green *red**

Vessel viewed from dead ahead
Vessel with tow viewed from dead ahead
Vessel viewed from port bow
Vessel with tow viewed from port bow
Vessel at anchor

69) What do these lights indicate?

*** white**
*** white**
***red**

Vessel viewed from dead ahead
Vessel with tow viewed from dead ahead
Vessel viewed from port bow
Vessel with tow viewed from port bow
Vessel at anchor

70) What do these lights indicate?

*** white**
*** white**
*** white**
*** green *red**

Vessel viewed from dead ahead
Vessel with tow viewed from dead ahead
Vessel viewed from port bow
Vessel with tow viewed from port bow
Vessel at anchor

71) A large ship is approaching head-on, and the ship signals with two horn blasts. What are the ship's intentions, and what should you do?

- a) The ship intends to pass port-to-port. You should steer to starboard.
- b) The ship intends to pass starboard-to-starboard. You should steer to port.
- c) The ship intends to continue straight ahead, and you should keep clear any way possible.
- d) The ship is about to drop anchor, and you should keep clear any way possible.

72) A large ship is approaching from directly astern, and the ship signals with two horn blasts. What are the ship's intentions, and what should you do?

- a) The ship intends to pass on your port side. You should steer to starboard.
- b) The ship intends to pass on your starboard side. You should steer to port.
- c) The ship intends to continue straight ahead, and you should keep clear any way possible.
- d) The ship is about to drop anchor, and you should keep clear any way possible.

73) When does a starboard-tack boat have to keep clear of a port tack boat?

- When the port-tack boat is close-hauled.
- When the port-tack boat is much larger.
- When the port-tack boat is flying a spinnaker.
- when the port-tack boat is being overtaken by the starboard-tack boat.
- All of the above.

SAFETY

74) What is the most important item of personal safety equipment, other than a lifejacket, to carry aboard a CSC keelboat at night?

- Knife and marlinspike
- Pocket-size emergency flares
- Shark repellent
- Hypothermia blanket
- Hand-held VHF radio
- Waterproof flashlight and whistle

75) If someone falls overboard from a boat with a spinnaker flying in rough weather, a good emergency procedure to follow is:

- a) Begin taking down the spinnaker in a careful and methodical manner, while Keeping a precise dead reckoning log of all the boat's movements after the incident.
- b) Release the spinnaker halyard immediately.
- c) Release the spinnaker sheet immediately and sail back to the person overboard.
- d) Tack the boat immediately to backwind the spinnaker, and heave to.

76) When is it okay to sail very close to the stern of a large ship?

- Never.
- Only when the ship is at anchor and facing into the tide.
- Only when the ship is at anchor or moving slowly.
- Only when you want to get a close look at the ship's name.
- Only when you want to get a close look at the ship's propeller blades.

77) What item of safety equipment is *not* required to be supplied by the skipper of a CSC keelboat?

- Chart
- Compass
- Tools
- Flares
- First aid kit
- Flashlights
- Horn

78) Which of the following is **not** required by the U.S. Coast Guard to be aboard CSC keelboats?

- One life jacket for every person on board
- Throwable life jacket (buoyant cushion) accessible on deck
- Fire Extinguisher in operable condition
- Flares
- Daytime distress signal (usually an orange flag)
- Horn
- Fog bell
- VHF radio
- "CF" numbers

RADIO PROCEDURES

79) When communicating by radio:

- a) Always say the name of the boat you are calling first, and the name of your boat second.
- b) Always say the name of your boat first, and the name of the boat you are calling second.
- c) Always say the name of the boat that initiated the call first, and the name of the other boat second.
- d) Always say the name of the boat receiving the call first, and the name of the boat that initiated the call second.

80) When communicating by radio, you should give your boat's call sign:

- a) Whenever you transmit.
- b) Whenever you are calling another boat, answering a boat calling you, or ending communication with another boat.
- c) Whenever you are calling another boat.
- d) Only when you are in distress.

81) Which VHF radio channel should be used only for calling and distress?
(hint: the tide book contains information about VHF channel allocations)

82) Which VHF radio channel is used only for communication with the Coast Guard?

83) List two VHF channels that can be used for non-emergency, informal communication between recreational vessels (after contact has been established on the calling frequency):

84) On which VHF channel would you call a ship that you might be having some difficulty keeping clear of?

BOAT OPERATION, MAINTENANCE, AND REPAIR

85) If a stainless steel screw is attached to an aluminum mast in a salt-water spray environment, what will happen?

- The steel will corrode faster than the aluminum.
- The aluminum will corrode faster than the steel.
- Both will corrode rapidly.
- Neither will corrode at all.

86) What causes polyester resin to harden?

- Exposure to air.
- Agitation and Aeration.
- Mixing with a small amount of catalyst.
- Reaction with chemicals in the fiberglass cloth.
- Exposure to sea water.

87) When repairing fiberglass:

- Always mix a test batch of resin.
- Cut all the fiberglass cloth before mixing the resin.
- Always use protective clothing (gloves or particle mask).
- Always measure the hardener precisely - never guess or estimate.
- Mix the hardener into the resin for at least one minute.
- All of the above.

88) The difference between "bonding resin" and "Surfacing resin" is:

- a) Bonding resin is formulated to be more cohesive. It is stronger, but will cure faster and has a shorter "pot life."
- b) Surfacing resin will penetrate better into a porous surface (like wood), so it is better for coating rudders and centerboards.
- c) Bonding resin contains an additive that makes it useful for attaching hardware to a fiberglass surface.
- d) Surfacing resin has an additive that allows the surface to cure to a hard finish for final sanding and finishing, but additional layers of cloth and resin may not adhere well.

89) A lead-acid type battery will be damaged if:

- It is left in a state of discharge for a long period of time.
- It is left fully charged for a long period of time.

It is charged very slowly.
It is discharged very slowly.

90) Where could you find spare bulbs for the running lights on a CSC Commander?

In the switch box
In the flare kit
In the first aid kit
In a ziplock bag taped to the forward bulkhead
At West Marine.

91) Which typically consumes the most electricity?

Running lights
A radio while transmitting
A radio while receiving
A cabin light

92) Which typically consumes the least electricity?

Running lights
A radio while transmitting
A radio while receiving
A cabin light

93) If an outboard motor requires a fuel-oil mixture of "fifty-to-one," how much oil should be mixed into one six-gallon tank of gasoline?

none
one-half pint
one pint
one quart
two quarts

94) What should you do with an outboard motor that has just fallen into salt water while running (after pulling it out of the water)?

Remove cover and rinse thoroughly with fresh water.
Remove spark plugs and pull starting cord to purge cylinders.
Spray WD-40 or oil into cylinders and carburetor.
All of the above.

NAUTICAL ETIQUETTE

95) When is it okay to tie up alongside another boat that is already anchored or docked?

- a) Never.
- b) Only when you have adequate fenders out and tie up properly.
- c) Only when at a public dock, such as Sam's in Tiburon.
- d) Only with the permission of the owner or crew of the other boat, or when directed to do so by a harbormaster or Port Captain.
- e) Only if you leave at least one of your crew standing by to move your boat in case the crew of the other boat returns before you.

96) When using the guest dock at another yacht club:

Fly the CSC burgee from the rigging.
Always check in with the bartender or club manager.
Sign the guest log.
Be prepared to show your CSC membership card.
Be careful not to block an area needed to use a boat hoist.
All of the above.

97) If you are involved in a collision with another boat:

- a) Tell them that you are from St. Francis Yacht Club.
- b) You are required to file an accident report with the Coast Guard if the damage exceeds \$200.
- c) You should call the CSC Commodore immediately over VHF.

d) Don't mention it to anyone, so that our insurance doesn't go up.

98) What material is acceptable to throw overboard?

Contents of a bucket which has just been used as the head.
Anything that will sink or biodegrade.
The above items, plus paper towels used to clean mud off the anchor.
Uncooperative crew.
It is never acceptable to throw anything overboard.

99) What should you do if you encounter a fleet of racing sailboats?

- a) Stay well clear of the area they are racing in. They have right-of-way over all boats not racing.
- b) Avoid sailing to windward of any of the racing boats, and make early course changes so they know you intend to keep clear.
- c) Follow government right-of-way rules. Racing boats can be expected to observe the right-of-way rules between themselves and other boats not racing.
- d) Avoid sailing in the wake of a racing boat.
- e) Get in close and take lots of pictures. Racing sailors like being photographed.

100) What should you do with a crew or passenger who is seasick?

Tie them up.
Make them drink lots of water.
Send them down below.
Call the coast guard over VHF channel 22 and have them taken ashore.
Make them steer the boat.

EXTRA CREDIT: What is Slim's real name?

EXTRA CREDIT: Name all seven points on Angel Island

=====

ADDITIONAL TEST QUESTIONS

To be mixed in with questions from original test to form "version II" for people taking the test a second time.

What is the most effective way to flatten the mainsail on a fractional rig?

Tighten the backstay
Tighten the mainsheet
Tighten the outhoaul
Tighten the downhaul or cunningham

How should a jib lead be adjusted for best sail trim on a beam reach?

Move the lead out and forward.
Move the lead out and aft.
Move the lead in and forward.
Move the lead in and aft.

What VHF channel is used by Vessel Traffic Control?

When the leeward telltales on the top of a jib flutter up and the bottom leeward telltales are streaming straight aft, how could you improve sail trim?

Tighten the halyard.
Loosen the halyard.
Head up.
Bear off.
Move the lead forward.
Move the lead aft.

When may a CSC sailboard be sailed at night?

- a) Only when two sailboards are sailing within hailing distance of each other, and at least one of them is sailed by a senior windsurfer.
- b) Only when two sailboards are sailing within hailing distance of each other, and both of them are sailed by senior windsurfers.

c) Only when a waterproof flashlight and whistle are carried.

d) Never.

How far in advance should Cruising Skippers sign up to skipper a CSC cruise?

Three days before the date of the cruise.

Five days before the date of the cruise.

Seven days before the date of the cruise.

Ten days before the date of the cruise.

Fourteen days before the date of the cruise.

When should the cruise answering service be notified of the cruise?

At least one week before the cruise.

At least 10 days before the cruise.

Before noon on Wednesday before the cruise.

Before 3:00 PM on Friday before the cruise.

How many guests can a non-rated member sign up to come with them on a cruise?

none, unless there is extra space when the cruise departs.

One, but members have priority if there is not enough space.

One, and they have equal standing if there is not enough space.

Two, but members have priority if there is not enough space.

Two, and they have equal standing if there is not enough space.

When can three CSC keelboats all go on a cruise together?

Never.

Any time that all three keelboats are in operable condition.

Only when one keelboat is left for daysailing.

Only with prior approval of the CSC Executive Committee.

When can a CSC Cruising Skipper take a boat on a private day cruise?

a) Only with prior approval of the CSC Executive Committee.

b) Only with prior approval of the CSC Cruising Chair.

c) Only if the skipper has taken or has signed up to take one club cruise during that quarter.

d) Two of the above conditions must be met.

e) All of the above conditions must be met.

When can a CSC Cruising Skipper take a boat on a private two-day cruise?

a) Only with prior approval of the CSC Executive Committee.

b) Only with prior approval of the CSC Cruising Chair.

c) Only if the skipper has taken or has signed up to take one club cruise during that quarter.

d) Two of the above conditions must be met.

e) All of the above conditions must be met.

What size vessel is required to display range lights?

Over 16 feet in length.

Over 50 meters in length.

Over 200 meters in length.

All vessels must have range lights.

Range lights are only used on fixed navigational aids.

What will happen if the main halyard is not all the way up?

The mainsail will be hard to reef.

The boom will be lower than usual.

The boat will not point as high.

There will be more load on the gooseneck.

Which will cause the most damage to a sail?

Using it with a batten missing.
Overtrimming.
Improper folding.
Putting it away wet.
Leaving the outhaul tight when the boat is put away.

What should you do if the rudder breaks on a CSC Commander while you are out sailing in the middle of the bay, beyond the end of the pier?

Lower the sails immediately, anchor, and wait for assistance.
Issue a "MAYDAY" call over the radio.
Sail rudderless back into the marina.
Sail rudderless into the South Sailing Basin, drop sails, and anchor.
Build a jury rig with the spinnaker pole and cabin door.

On March 7, 1990, at 1:00 PM, what would the tidal current be like at a point halfway between the first break in the pier and the eastern end of the pier?

There would be little or no current.
Approximately 1/2 knot flowing to the west.
Approximately 1/2 knot flowing to the north.
Approximately 1/2 knot flowing to the south.
Approximately 2 knots flowing to the west.
Approximately 2 knots flowing to the north.
Approximately 2 knots flowing to the south.

You are sailing away from Southampton Shoal light on a course of 314° magnetic. At 5:10 PM, the north tower of the Golden Gate Bridge appears from behind Angel Island. At 5:22, the south tower comes into view. How far have you sailed in that time interval?

0.30 nautical miles
0.35 nautical miles
0.40 nautical miles
0.45 nautical miles
0.50 nautical miles
0.55 nautical miles
0.60 nautical miles
not enough information to determine distance sailed.

What is your speed over the bottom?

1.50 knots
1.75 knots
2.00 knots
2.25 knots
2.50 knots
2.75 knots
3.00 knots
not enough information to determine speed over the bottom.

The date is August 6, 1990. What is your speed through the water?

1.50 knots
1.75 knots
2.00 knots
2.25 knots
2.50 knots
2.75 knots
3.00 knots
not enough information to determine speed through the water.

What color is the light in the middle of the rip-rap breakwater at the entrance to the Berkeley Marina?

Who is responsible for replacing winch handles lost overboard?

The skipper.
The person who dropped the handle overboard.
The person at the helm.
The CSC Executive Committee.

You are on a boat sailing at 3 knots, and the apparent wind is from 90° off the port beam at 4 knots. What is the true wind speed?

- 2 knots.
- 3 knots.
- 4 knots.
- 5 knots.
- 6 knots.
- 7 knots.

You are at the west end of the Richmond Breakwater. What is the compass course to the entrance to the Berkeley Marina?

- 105°
- 107°
- 109°
- 121°
- 123°
- 125°

How long will it take to sail this leg at a speed of 3 knots?

- Less than one hour.
- About one hour.
- About one hour and ten minutes.
- About one hour and twenty minutes.

From buoy "x" of the Olympic Circle, what is the approximate compass course to the main entrance to the Berkeley Marina?

- North-east
- East by North-east
- East
- East by South-east
- South-east

What is the characteristic of the light at the west end of the Berkeley Pier?

- Flourescent rotating white light.
- The light is four meters above sea level.
- There are two flashes every 4 seconds.
- The structure is 15 feet high.
- The structure includes a radar reflector.
- All of the above.

When a ship says on the radio that they will use "delta-echo span," what does it mean?

- a) They are passing under the Golden Gate Bridge on their way to the Delta.
- b) They will pass between the piers on the Bay Bridge marked "D" and "E" on the chart.
- c) They are using a special code by which the Bar Pilots communicate scheduling information about ship arrivals and departures.
- d) They will repeat all transmissions twice across their allocated bandwidth.

Starting from the break in the Berkeley Pier, if you sail directly towards Brooks island on a typical summer afternoon, what will happen?

- You will sail directly into the Angel Island wind shadow.
- The wind will lighten and move forward.
- The wind will lighten and lift.
- The wind will increase and lift.

Where are the rocks marked by the Berkeley Reef marker?

- a) To the north of the marker.
- b) To the north and east of the marker.
- c) All around the marker, including some rocks to the west.
- d) There are no rocks in the immediate area, but a small sand bar is north of the marker.

When is it acceptable to receive money for giving sailing lessons in a CSC boat?

- a) Never.

- b) Only if you have a Coast Guard license.
- c) Only if you also give lessons on a private boat.
- d) Only if you are a member of the Executive Committee.
- e) There are no restrictions on collecting money for private lessons, as long as it does not interfere with CSC activities and all operating rules are followed.

The tides in San Francisco Bay can be described as:

- Diurnal.
- Semi-diurnal.
- Mixed diurnal and semi-diurnal.
- Stepwise sinusoidal.
- Mean.

According to the tide book, when does low water occur at Berkeley?

- 21 minutes before low water at the Golden Gate.
- 21 minutes after low water at the Golden Gate.
- 38 minutes before low water at the Golden Gate.
- 38 minutes after low water at the Golden Gate.
- 45 minutes before low water at the Golden Gate.
- 45 minutes after low water at the Golden Gate.

Under what circumstances might you move a jib lead further outboard?

- a) To allow a wider sheeting angle and at the same time increase the draft of the sail, for sailing close-hauled in light air.
- b) To allow a wider sheeting angle without increasing the draft of the sail, for sailing close-hauled in high wind and chop.
- c) To increase the twist in the sail, for sailing in light air and chop.
- d) To allow a narrower sheeting angle and at the same time increase the draft of the sail, for sailing close-hauled in light air.

How can you tell if a navigational aid is floating or fixed?

- a) The chart will indicate "Fl" if it is a floating aid.
- b) The chart will have a diamond-shaped symbol at the location of the buoy if it is a floating aid.
- c) The chart will have a magenta circle around the location of the buoy if it is a floating aid.
- d) The chart does not indicate whether an aid is floating or fixed, but with few exceptions, all navigational aids inside the six fathom curve are fixed, while those in deeper water are floating.

When packing a spinnaker, how many edges of the sail must be run to insure that it is not twisted?

- one
- two
- three
- four
- depends on the type of spinnaker bag

Which Sunday in May, 1990 would be best for planning a cruise to Mile Rock?

- May 5
- May 12
- May 19
- May 26

EXTRA CREDIT: The first European ship known to enter San Francisco Bay arrived in 1775. Where did it anchor?