

U.S.C.G. Merchant Marine Exam

First Class Pilot

Q370 Deck General – Safety

(Sample Examination)

Choose the best answer to the following Multiple-Choice Questions.

1. When water is used to fight a fire on board a ship, the effect of the weight of the water must be taken into account. How much sea water will increase the weight displacement by one ton?
- A. 500 liters
 - B. 100 gallons
 - C. 64 cubic feet
 - D. 35 cubic feet

Correct answer: D

2. Which portable fire extinguisher is normally recharged in a shore facility?
- A. Dry chemical (cartridge-operated)
 - B. Carbon dioxide
 - C. Water (pump tank)
 - D. Water (cartridge-operated)

Correct answer: B

3. What are the required number and type of hand portable fire extinguishers for a galley having an area of 3,500 square feet?
- A. One B-II extinguisher or post 2017 One 40-B extinguisher
 - B. One C-II extinguisher or post 2017 One 40-B:C extinguisher
 - C. Two B-II or C-II extinguishers or post 2017 Two 40-B:C extinguishers
 - D. Two A-II or B-II extinguishers or post 2017 regulation equivalent of Two 2-A or 40-B extinguishers

Correct answer: C

4. Where is the pivoting point located on a fully loaded vessel with normal trim proceeding ahead at sea speed?
- A. Right at the bow
 - B. One-third the length of the vessel from the bow
 - C. Two-thirds the length of the vessel from the bow
 - D. One-half the length of the vessel from the bow

Correct answer: B

5. Squat is a natural phenomenon as a ship moves through a restricted channel due to what basic principle?
- A. Increased pressure on the hull resulting from increased speed
 - B. Decreased pressure on the hull resulting from increased speed
 - C. Decreased pressure on the hull resulting from decreased speed
 - D. Increased pressure on the hull resulting from decreased speed

Correct answer: B

6. When computing gross under keel clearance (UKC), what factor should NOT be considered?
- A. Squat allowance
 - B. Heel allowance
 - C. Tidal residual allowance
 - D. Wind residual allowance

Correct answer: D

7. Which type of portable fire extinguisher is NOT designed for use on flammable liquid fires?
- A. Foam
 - B. Water (cartridge-operated)
 - C. Dry chemical
 - D. Carbon dioxide

Correct answer: B

8. Which of the following statements is/are TRUE in regard to Ro-Ro vessels' spaces that are "specially suitable for vehicles"?
- A. The spaces shall be fitted with an approved fire or smoke detecting system.
 - B. The spaces shall have designated smoking areas.
 - C. The spaces are prohibited from being fitted with fixed CO₂ fire extinguishing systems.
 - D. All of the above

Correct answer: A

9. You are using the anchor to steady the bow while maneuvering. When do you know you have the proper scope of anchor cable out?
- A. If the scope is not more than 5 times the depth of the water
 - B. When the bow is held in position with the engines coming slowly ahead
 - C. When the cable enters the water at an angle between 60° and 85° from the horizontal
 - D. When the anchor is just touching the bottom

Correct answer: B

10. Which statement about tunnel bow thrusters fitted to large vessels is TRUE?
- A. They are effective on most vessels at speeds up to 10 knots.
 - B. When going astern at slow speed, they provide effective steering control.
 - C. Because of their location, most modern installations have as much power as a tug.
 - D. They are fully effective at all drafts.

Correct answer: B

11. A fire starts on your vessel while refueling. Which action should you take FIRST?
- A. Sound the general alarm
 - B. Determine the source of the fire
 - C. Stop the ventilation
 - D. Attempt to extinguish the fire

Correct answer: A

12. Who must approve the vessel's trim and stability booklet?

- A. United States Coast Guard
- B. National Cargo Bureau
- C. Society of Naval Architects and Marine Engineers
- D. International Maritime Organization

Correct answer: A

13. The holding power of an anchor at a given scope of cable increases when which occurs?

- A. The amount of chain lying along the bottom decreases
- B. The amount of chain lying along the bottom increases
- C. The shank is at a 50-degree angle
- D. The length of the catenary is reduced

Correct answer: B

14. What is the mechanical advantage of tackle number 7 as shown in illustration D029DG below?

- A. 0.0
- B. 0.5
- C. 1.0
- D. 2.0

Correct answer: D

15. Which of the following is NOT required to be part of a vessel's Fire Control Plan?

- A. Ventilation dampers
- B. Ventilation fan capacity
- C. Ventilation fan control
- D. Ventilation fan location

Correct answer: B

16. Which is the best method of protecting that portion of a fiber anchor line nearest the anchor from chafing on the bottom?

- A. Replacing that portion with a short length of chain
- B. Using a small scope ratio
- C. Using a synthetic line
- D. Using a hockle to keep that portion of the anchor line off the bottom

Correct answer: A

17. Which of the following is NOT identified on the vessel's fire control plan?

- A. Gas detector
- B. Dry chemical monitor
- C. Fire and emergency signals
- D. Fire control plan

Correct answer: C

- 18.** You are conning a twin-screw vessel going ahead with rudders amidships. How will the vessel respond if the port screw stops turning?
- A. The bow will go first to port and then to starboard
 - B. The bow will go to port
 - C. The vessel will not veer to either side
 - D. The bow will go to starboard

Correct answer: B

- 19.** When a vessel is entering or leaving a port, where is the record of engine speeds kept?
- A. The Official Logbook
 - B. The engine rough log
 - C. The deck rough log
 - D. The bell book

Correct answer: D

- 20.** What speed do most bow thrusters generally become ineffective?
- A. At any speed ahead
 - B. Over 1 knot sternway
 - C. Over 3 knots headway
 - D. At any speed astern

Correct answer: C

- 21.** A twin-screw ship going ahead on the starboard screw only, will move the bow in which direction?
- A. The bow will swing to starboard
 - B. The bow will swing to port
 - C. The bow will shift from side to side
 - D. The bow will remain in a straight line

Correct answer: B

- 22.** You are conducting trials to determine the maneuvering characteristics of your vessel. While making a turn, you take ranges and bearings of an isolated light with the results as shown. Based on this information, what is the advance for a turn of 90°? Illustration D034DG
- A. 820 yards
 - B. 870 yards
 - C. 930 yards
 - D. 975 yards

Correct answer: B

- 23.** The possibility of wake damage can be reduced by following which action?
- A. Alternate engine speeds
 - B. Apply rudder in both port and starboard directions
 - C. Slow down when passing moored vessels
 - D. Passing close aboard to the moored vessel

Correct answer: C

24. In moderate wind and current what should be the length of chain with a single anchor?

- A. 2 times the depth of the water in poor holding ground
- B. 8 times the depth of the water in deep water
- C. 5 times the depth of the water in good holding ground
- D. 10 times the depth of the water in shallow water

Correct answer: C

25. On a single-screw vessel, when coming port side to a pier and being set off the pier, which action should you take?

- A. Point the vessel's head well up into the slip and decrease your speed
- B. Approach the pier on a parallel course at reduced speed
- C. Swing wide and approach the pier so as to land starboard side to
- D. Make your approach at a greater angle than in calm weather

Correct answer: D

26. Which VHF channel should you avoid using as a working channel?

- A. 7A
- B. 8
- C. 9
- D. 16

Correct answer: D

27. You are going astern (single-screw, right-handed propeller) with the anchor down at a scope of twice the depth of the water. As the anchor dredges, how should you expect the vessel to react?

- A. The stern will walk to the same side as the anchor being used
- B. The stern will walk to port at a faster rate than normal
- C. The vessel will back in a straight line only if the starboard anchor is deployed
- D. The stern will walk to port but at a reduced rate

Correct answer: D

28. Your vessel is proceeding through a narrow channel. What actions can you take to avoid any sudden sheers of the vessel?

- A. Reduce speed and stay in the deepest part of the channel
- B. Increase speed and stay to the outer limits of the channel
- C. Put your offshore anchor well in the water
- D. Reduce speed and stay to the outer limits of the channel

Correct answer: A

29. Your vessel must moor port side to a berth limited by vessels ahead and astern using a single tug. You are stemming a slight current and there is a light breeze off the dock. Where should the tug make up to the vessel?

- A. The stern on a hawser
- B. The vessel's quarter
- C. The vessels waist
- D. The bow

Correct answer: D

30. In illustration D038DG below, what part of the anchor is indicated by the letter "K"?

- A. Shank
- B. Crown
- C. Bending shot
- D. Ring

Correct answer: D

31. Which knot shown in illustration D030DG below represents a square knot?

- A. H
- B. R
- C. W
- D. P

Correct answer: C

32. When taking a Pilot from a pilot vessel in a seaway, which way should you head your vessel if the ladder is on the leeward side?

- A. Sea on the lee quarter with ship moving ahead slowly
- B. Sea on the weather bow and ship moving ahead slowly
- C. Sea on the quarter with sternway on the ship
- D. Bow to the sea and no way on your vessel

Correct answer: B

33. Your ship is dead in the water with the rudder amidships. As the right-handed screw starts to turn ahead, which way will the bow tend to go?

- A. Straight ahead
- B. To starboard
- C. As influenced by the tide and sea
- D. To port

Correct answer: D

34. What is the mechanical advantage, neglecting friction, of tackle number 12 as shown in illustration D029DG below?

- A. 3.0
- B. 5.5
- C. 6.0
- D. 7.0

Correct answer: D

35. Which statement is TRUE concerning radiotelephones on board towing vessels?

- A. There cannot be a radiotelephone located anywhere except in the wheelhouse.
- B. Only the Master of the vessel is allowed to speak over the radiotelephone.
- C. Only distress messages may be transmitted over channel 13.
- D. The officer in charge of the wheelhouse is considered to have the radiotelephone watch.

Correct answer: D

36. Multiple factors will have an effect on your vessel when it is maneuvering in restricted waters. Which of the following factors is the combination of sinkage and trim of the vessel?

- A. Bank cushion
- B. Heel
- C. Squat
- D. Bank suction

Correct answer: C

37. A self-contained breathing apparatus is used to _____.

- A. make underwater repairs to barges
- B. resuscitate an unconscious person
- C. enter areas that may contain dangerous fumes or lack oxygen
- D. determine if the air in a tank is safe for men

Correct answer: C

38. Your ship is in shallow water and the bow rides up on its bow wave while the stern sinks into a depression of its transverse wave system. What is this called?

- A. Parallel sinkage
- B. Squatting
- C. Broaching
- D. Fish tailing

Correct answer: B

- 39.** Your vessel is port side to a pier with a spring line led aft from the bow. How will the vessel respond in calm weather, with the engines ahead and hard left rudder?
- A. Both the bow and stern will move in
 - B. The bow will slip out and the stern in
 - C. The bow will swing in and the stern out
 - D. Both the bow and stern will move out

Correct answer: C

- 40.** While proceeding up a narrow waterway you observe a vessel berthed in the river with slack mooring lines. Which is the most prudent action to take FIRST?
- A. Contact the moored vessel
 - B. Give 5 short blasts on the whistle
 - C. Reduce the speed of your vessel
 - D. Call the US Coast Guard

Correct answer: C

- 41.** When using two tugs to assist in mooring a large, deeply laden ship, where is the most powerful tug usually placed?
- A. Forward to control the bow
 - B. Amidships to move the entire vessel evenly
 - C. Aft to assist the ship's rudder and propeller
 - D. Anywhere, since the maneuverability of the tug governs the placement not the power

Correct answer: A

- 42.** A stored-pressure water extinguisher is most effective against which class of fires?
- A. Class A
 - B. Class B
 - C. Class C
 - D. Class D

Correct answer: A

- 43.** If you have a fire in the engine room, what is the FIRST action you should take?
- A. Discharge the fixed CO2 system into the engine room
 - B. Maneuver your vessel into the wind
 - C. Have all of your crew get into the liferaft
 - D. Secure the fuel supply and ventilation to the engine room

Correct answer: D

- 44.** Which best describes an anchor buoy?
- A. A mark of the number of fathoms in an anchor chain
 - B. A buoy attached to the scope of an anchor chain
 - C. A black ball that is hoisted when the ship anchors
 - D. A buoy attached to the anchor

Correct answer: D

45. When turning a ship in restricted space with a strong wind, which is the BEST action to take?

- A. Go ahead on both engines with the rudder hard to one side, if on a twin-screw vessel
- B. Turn so that the tendency to back into the wind can be used, if on a single-screw vessel
- C. Back down with the rudder hard to one side, if on a single-screw vessel
- D. Take advantage of the tendency to back to port, if on a twin-screw vessel

Correct answer: B

46. You are docking a vessel starboard side to with the assistance of two tugs. You are attempting to hold the vessel off by operating both tugs at right angles to the vessel and at full power. Which statement is TRUE?

- A. The bow closes the dock first
- B. The bow doesn't close the dock first
- C. The ship has no headway at the time
- D. Steerageway is never taken off

Correct answer: C

47. You are making mooring lines fast to bits, stern to, as in some Mediterranean ports. A swell is liable to make the vessel surge. How should you tie up?

- A. Use wires only from the stern and each quarter.
- B. Use nylon or synthetic fiber hawsers for their elasticity
- C. Use manila hawsers from the stern chock straight down to the pier
- D. Use wires from each quarter and manila hawsers from the stern.

Correct answer: B

48. Why is a VLCC (100,000 DWT+) with a 30,000 Shaft Horsepower Steam Turbine slow to respond to engine movements, and has less stopping power than normal ships?

- A. They have a bigger propeller
- B. They have larger power to weight ratio
- C. They have smaller power to weight ratio
- D. They possess smaller propellers

Correct answer: C

49. A breeches buoy is being rigged from the shore to a stranded vessel. The initial shot line passed to the vessel is normally made fast to a _____.

- A. hawser with breeches buoy and harness attached
- B. tail-block and whip which may be used to pass a hawser to the vessel
- C. hawser which should be made fast to the vessel below the intended location of the tail-block
- D. hawser which is used to pass a tail-block and whip to the vessel

Correct answer: B

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Illustrations: 4

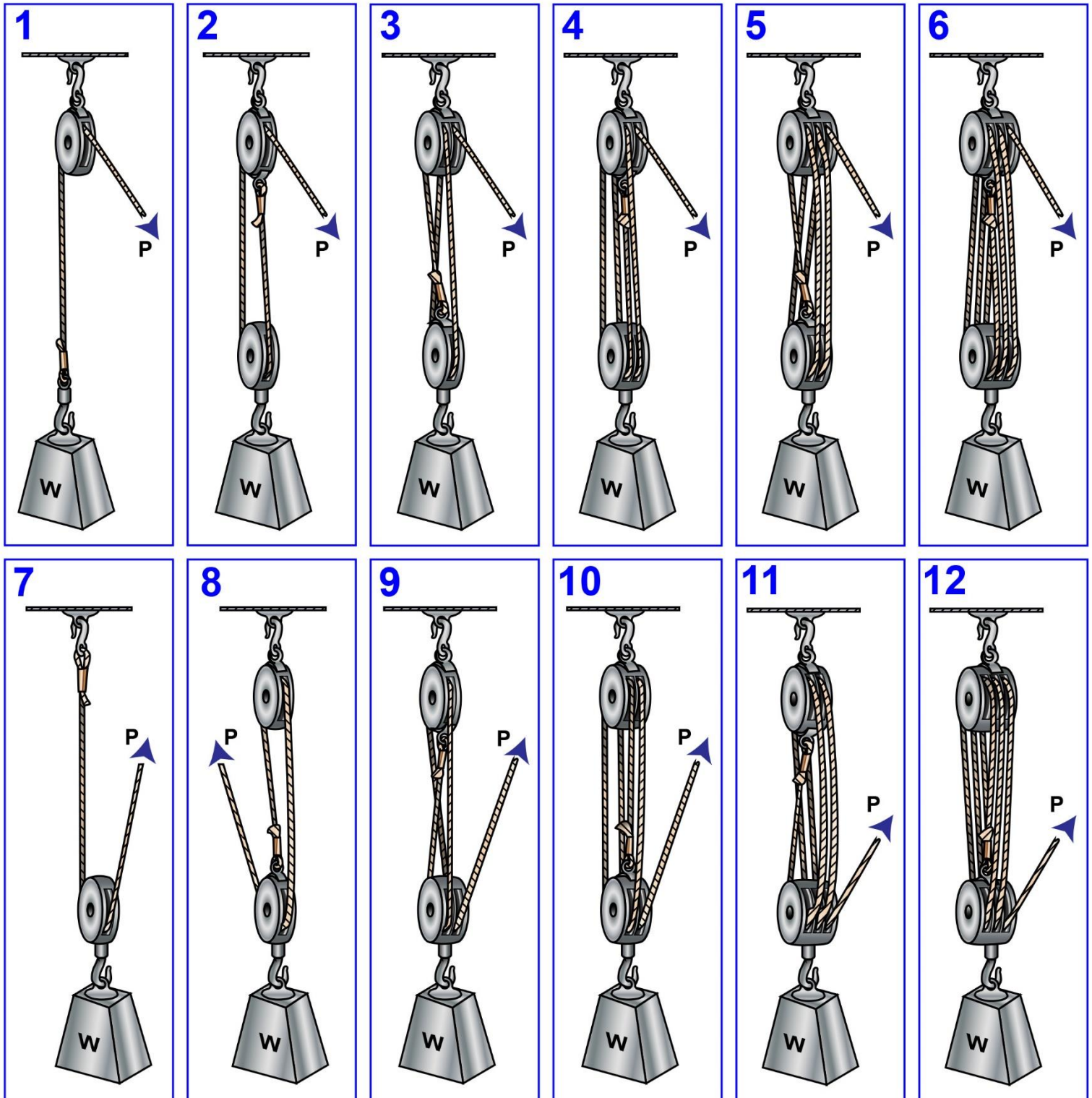
50. When possible, what is the FIRST step in fighting an engine fuel-pump fire which results from a broken fuel line?

- A. Check the spread of the fire with foam.
- B. Close the fuel line valve.
- C. Secure all engine room doors, hatches, and vents.
- D. Cast the barge off the wharf.

Correct answer: B



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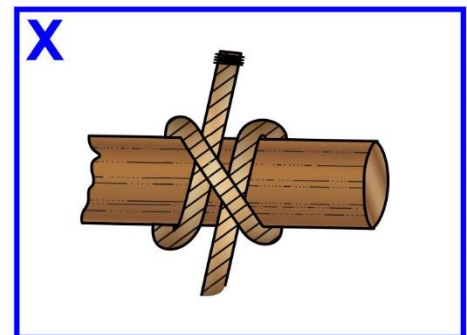
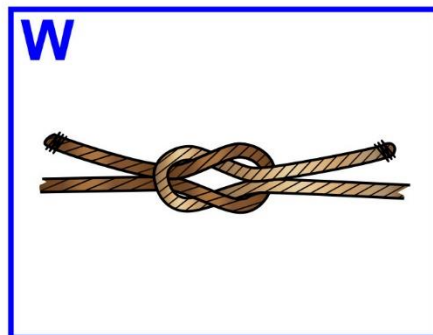
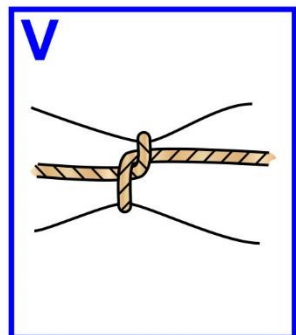
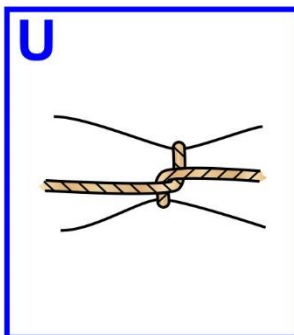
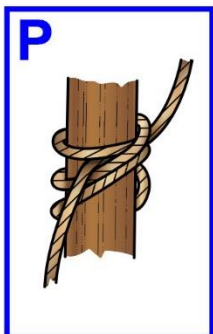
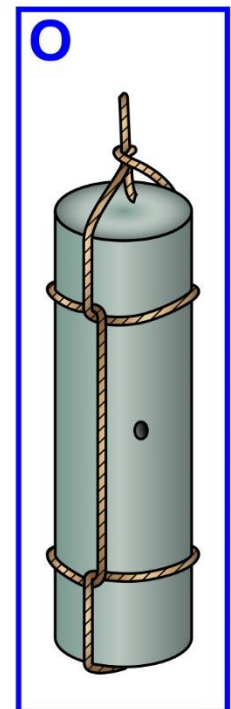
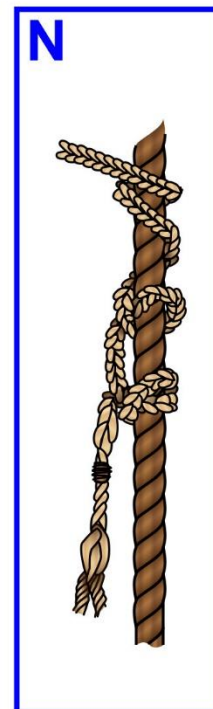
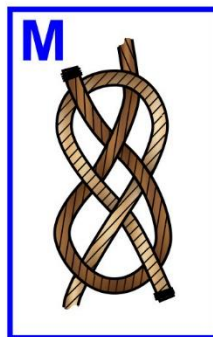
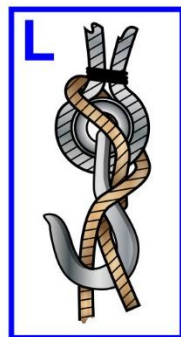
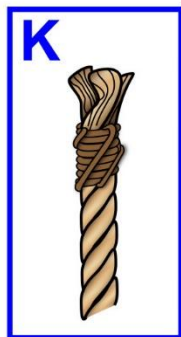
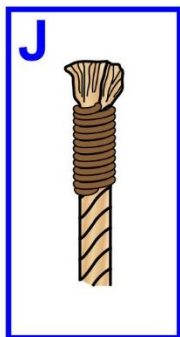
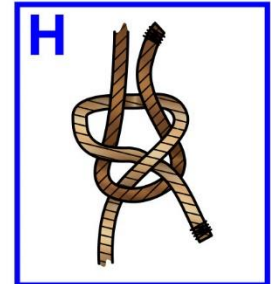
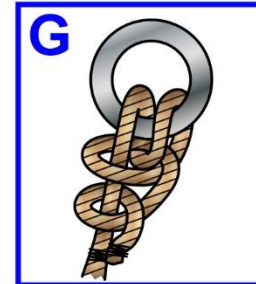
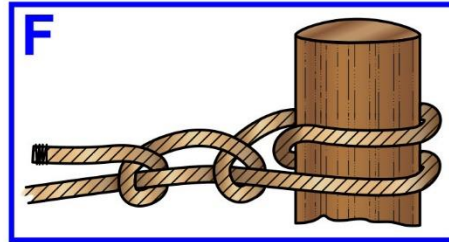
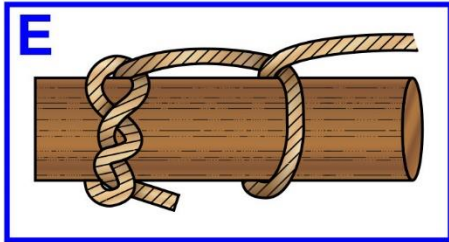
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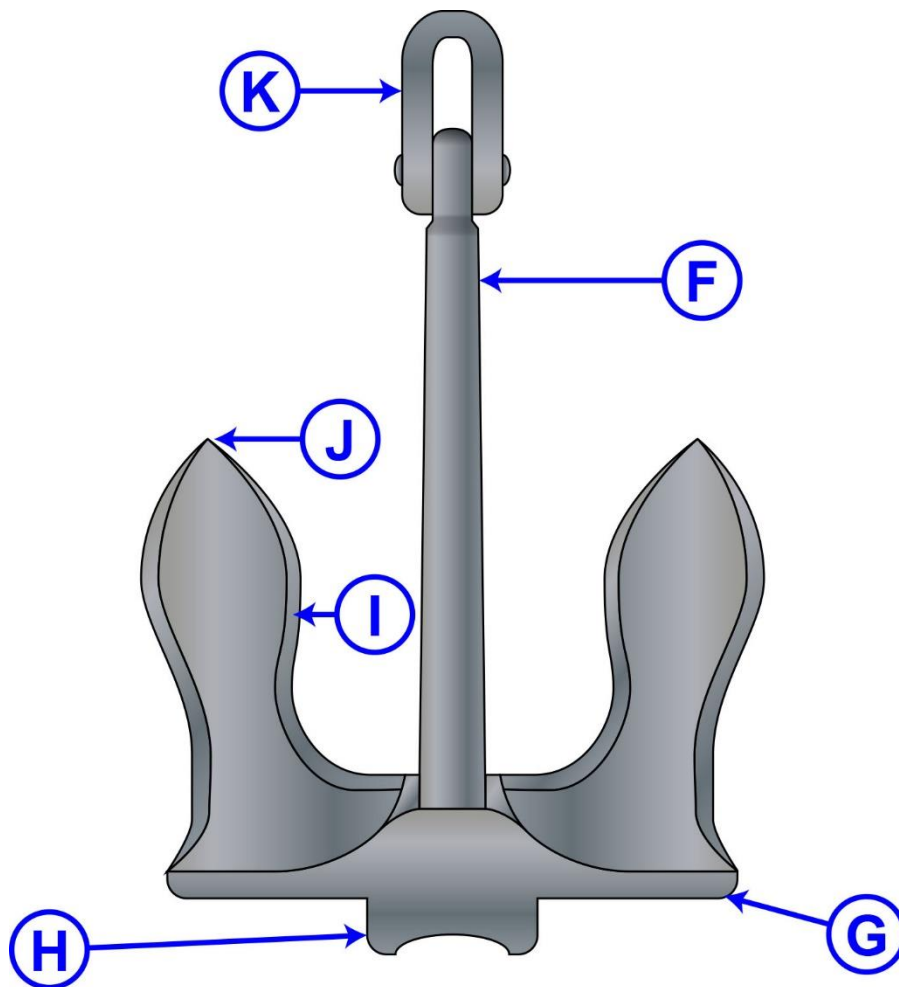


D034DG

HEADING (TRUE)	BEARING (TRUE)	RANGE (YDS)	REMARKS
228°			INITIAL HEADING
228°	232°	2260	ON INITIAL COURSE
228°	234°	1700	RIGHT FULL RUDDER ORDERED
230°	236°	1490	
252°	235°	1275	
275°	231°	1000	
316°	214°	850	
352°	198°	975	
022°	194°	1210	
053°	197°	1430	
087°	202°	1600	
115°	209°	1690	
151°	217°	1700	
183°	225°	1600	
218°	232°	1350	RUDDER AMIDSHIPS
228°	235°	1125	STEADY ON 228°



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