

Knowledge Review One

Some questions may have more than one correct answer. Choose all that apply:

1. Complete the following depth-pressure-air volume-air density table:

Depth	Pressure	Volume	Density
0m/0ft	1 bar/ata	1	x 1
10m/33ft	_____	½	_____
30m/99ft	_____	¼	_____
40m/132ft	5 bar/ata	_____	x 5

2. As I descend, I need to equalize air spaces. Which of the following are accepted ways of equalizing my ears?
- a. Block my nose and attempt to gently blow through it.
 - b. Swallow and wiggle the jaw from side to side.
 - c. Block my nose and blow forcefully for an extended period.
3. During a descent, I try to equalize but discover I'm having trouble doing so. Which of the following is correct?
- a. Slow my descent, signal my buddy to slow down, and equalize more forcefully.
 - b. Stop my descent, signal my buddy, ascend slightly and try again.
 - c. Continue my descent while equalizing repeatedly.
 - d. Signal my buddy, ascend to the surface and start my descent over.
4. I should equalize
- a. early and often, before I feel discomfort.
 - b. when I begin to feel discomfort.
 - c. only if I experience pain.
5. I should not dive with a cold, nor use medications to dive with a cold.
- True False
6. The most important rule in scuba diving is:
- a. Breathe continuously and never hold my breath.
 - b. Always dive with a buddy.
 - c. Keep my mask on while in the water, even at the surface.
 - d. Check my SPG at least every couple of minutes.
7. Failure to follow the most important rule in scuba diving can cause serious lung overexpansion (lung rupture) injuries, which in turn can cause paralysis and death.
- True False
8. If I feel discomfort in a body air space while ascending, the correct action is to:
- a. Continue my ascent while blowing against blocked nostrils.
 - b. Stop, descend slightly and give trapped air time to work its way out.
 - c. Descend at least 10 metres/33 feet, then resume my ascent.
9. My buddy and I are planning a dive to 18 metres/60 feet. We would expect our air supply to last _____ at 10 metres/33 feet, all else being the same.
- a. longer than
 - b. shorter than
 - c. the same as
10. During a dive, I swim hard to keep up with a fish that interests me, but shortly begin to feel like I can't get enough air. The correct action would be to:
- a. Signal my buddy and head up to the surface.
 - b. Use the regulator purge button to boost air flow.
 - c. Stop all activity and rest to restore proper deep, slow breathing.
11. An object that is neutrally buoyant in fresh water will _____ in salt water.
- a. sink
 - b. float
 - c. be neutrally buoyant
12. The three overall benefits of the buddy system are practicality, safety and fun.
- True False
13. The primary considerations when choosing any piece of scuba gear are:
- a. suitability
 - b. brand
 - c. fit
 - d. comfort
14. I'm planning to dive the following week and am checking my gear. I put my kit together and notice that my regulator seems to breathe harder than I remember. The appropriate action would be to:
- a. Have it inspected and serviced as needed by a professional before using it.
 - b. Go ahead and use it, but limit my dive depth to 10 metres/30 feet.
 - c. Wash it in fresh water and see if the problem persists.
15. There is no way to use a DIN regulator on a yoke cylinder valve.
- True False
16. It is important to master buoyancy control because it allows me to control whether I descend, float or am neutrally buoyant. I adjust my buoyancy frequently while diving.
- True False

Student Diver Statement: I've completed this Knowledge Review to the best of my ability and any questions I answered incorrectly or incompletely, I have had explained to me and I understand what I missed.

Name _____
Date _____

Knowledge Review Two

Some questions may have more than one correct answer. Choose all that apply.

- I take a colorful fish identification slate with me while diving. Looking at the slate underwater at 12 metres/40 feet, I would expect the slate to look
 - a. smaller/farther away.
 - b. more colorful.
 - c. less colorful.
 - d. larger/closer.
- While underwater, I want to move efficiently by
 - a. moving as quickly as possible.
 - b. being streamlined.
 - c. having just a little more weight than I actually need.
 - d. swimming slowly and steadily.
 - e. maintaining proper trim.
- During a dive, I can't stop shivering. The proper response would be to
 - a. exit the water immediately, dry off and seek warmth.
 - b. exit the water as planned, but wear more exposure protection next time.
 - c. exit the water when convenient, and swim rapidly to warm up.
- During a dive, my buddy and I have to swim hard because of an unexpected current. If I were to begin to feel fatigued, have labored breathing, experience a feeling of suffocation or air starvation, and perhaps feel like I may panic, I should
 - a. signal "up" and head to the surface.
 - b. switch to an alternate air source.
 - c. stop all activity, signal my buddy and rest.
- When planning our dive, my two buddies and I agreed that the general procedure for buddy separation would be adequate. If during the dive I find I am with one buddy but can't see the other, which of the following applies?
 - a. This is a buddy separation. Stay with the remaining buddy and search for no more than a minute, then reunite on the surface.
 - b. This is a buddy separation. Stay with the remaining buddy, return to where the missing buddy was last seen and wait.
 - c. This is a buddy separation. The remaining buddy and I should split up and look for the missing buddy.
 - d. This is not a buddy separation for the remaining buddy and me. Stay with the remaining buddy and continue the dive while the one who is missing looks for us.
- The buddy system is _____ responsibility.
 - a. my buddy's
 - b. the divemaster's
 - c. my
 - d. no one's
- My buddy and I are planning a shore dive. We're descending onto a very gradual slope that begins at 5 metres/15 feet, so our descent and ascent will be a gradual part of swimming out and back underwater. We have similar cylinders filled to 200 bar/3000 psi. We plan:
 - 50 bar/500 psi reserve.
 - 20 bar/300 psi for our safety stop.
 - To turn the dive when we've used one-third of the air available to use on the dive.

This means we should head back when either of our SPGs read

 - a. 70 bar/800 psi
 - b. 145 bar/1900 psi
 - c. 157 bar/2270 psi
 - d. 170 bar/2500 psi
- My fin strap comes loose (later I discover that I didn't buckle it properly) while swimming at the surface in choppy waves. Which of the following habits would help me as I handle this problem?
 - a. Having my mask on and a mouthpiece in my mouth.
 - b. Having enough air in my BCD for adequate buoyancy.
 - c. Staying close to and signaling my buddy.
- I'm about to begin a descent with my buddy. Which of the following steps should I take before actually beginning my descent?
 - a. equalize my ears
 - b. orient myself to something at the surface
 - c. check that my computer is active
 - d. confirm that my buddy is ready
 - e. add air to my BCD
- My buddies and I are wearing wet suits for exposure protection. As I descend, my buoyancy will _____, so I should _____ to control my buoyancy.
 - a. remain constant, do nothing
 - b. increase, release air infrequently from my BCD in large amounts
 - c. increase, release air frequently from my BCD in small amounts
 - d. decrease, add air infrequently to my BCD in large amounts
 - e. decrease, add air frequently to my BCD in small amounts

Knowledge Review Two continued

11. I should never descend or ascend without a reference that I can follow or make contact with.
- True
 - False
12. As a prudent, conservative diver, the following are normal parts of my ascents:
- a. ascending at 18 m/60 ft per minute (or slower if specified by my computer)
 - b. inflating my BCD to begin my ascent
 - c. stopping for 3 minutes at approximately 5 metres/15 feet
 - d. adjusting my buoyancy in small amounts frequently
13. While boat diving, my buddy and I finish our safety stop and ascend to the surface. When I reach the surface, I should
- a. switch to my snorkel, inflate my BCD and signal "okay" to the divemaster.
 - b. signal "okay" to the divemaster, switch to my snorkel and inflate my BCD.
 - c. inflate my BCD, switch to my snorkel and signal "okay" to the divemaster.
14. Match the letter with the characteristics of the exposure suit type.
- a. insulation provided by layer of air and undergarment
 - b. proper fit is important to keep water trapped against your body
 - c. little or no insulation
- ___ wet suit
___ dry suit
___ skin suit
15. Which of the following can be a problem before the dive when diving on a warm day in a wet or dry suit?
- a. proper weighting
 - b. entering the water
 - c. overheating
 - d. hypothermia
16. If I have only one cutting tool, the recommendation is that I wear it where _____ hand can reach it
- a. my right
 - b. my left
 - c. my dominant
 - d. either

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Knowledge Review Three

Some questions may have more than one correct answer. Choose all that apply.

- One way to avoid disorientation while descending and ascending is to
 - a. close my eyes.
 - b. stay away from any objects.
 - c. follow a reference.
 - d. monitor my air supply closely.
- My buddy and I are diving from a boat and there's a mild current. In most circumstances, we would _____ for the first part of the dive.
 - a. swim into the current
 - b. let the current carry us
 - c. not try to go anywhere
- My buddy and I get disoriented while boat diving. There is a mild current, and we surface away from the boat. We should _____.
If unable to reach the boat or too tired, we should _____.
 - a. swim into the current to get ahead of the boat, redescend and return on the bottom.
 - b. swim across the current to reach the trail line, become buoyant and signal the boat to pick us up.
 - c. signal that we are okay, swim for shore.
 - d. swim with the current until rested, swim to the bottom and swim into the current.
- My buddy and I remain neutrally buoyant and stay above the bottom enough to avoid contact. We do this because bottom contact
 - a. may injure or kill fragile aquatic life.
 - b. tends to disturb the bottom and reduce the visibility.
 - c. increases the risk of accidental cuts, scrapes or stings.
- When assessing conditions, if there is anything that causes me significant anxiety or concern, if I can't address it, I should not dive. Ultimately, I am responsible for my own safety, so only I can make the final decision to dive.
 - True
 - False
- When planning to dive in an environment that is new to me, it is recommended that I get a local orientation from an experienced diver or professional who knows the procedures, hazards, points of interest and other factors unique to the environment.
 - True
 - False
- Risks of diving beyond my training and experience limits include that
 - a. in some forms of diving, the hazards are not obvious.
 - b. it can cause me to have a false sense of security.
 - c. anxiety from doing so can distract me from noticing other problems.
- While planning a shore dive, my dive buddy says it will be "no problem" diving in high surf that I've never been trained in nor have experience with. Looking at the surf, I don't think I am prepared for diving in it. My best response is to
 - a. agree to dive, but be ready to back out at any moment.
 - b. make the dive using the techniques I've learned for little to mild surf.
 - c. politely refuse to dive and suggest an alternate location with no significant surf.
- To prevent and/or handle injuries caused by aquatic life, I should
 - a. generally touch animals if I want, but only if I am familiar with them.
 - b. watch where I put my feet, hands and knees.
 - c. wear an exposure suit.
 - d. treat all organisms with respect.
 - e. be familiar with potentially hazardous animals where I'm diving.
 - f. be prepared to provide first aid for aquatic life injuries.
 - g. touch only dead stinging organisms.
- My buddy and I accidentally find ourselves in a rip current. There are no special, local procedures, so we follow the generally recommended action of
 - a. inflating our BCDs and swimming against the current.
 - b. deflating our BCDs and swimming against it on the bottom.
 - c. deflating our BCDs and swimming parallel to shore.
 - d. inflating our BCDs and swimming parallel to shore.
- Depending upon my location, tides can cause significant changes to depth, currents and visibility, or they may have hardly any effect.
 - True
 - False
- When boarding a dive boat, the divemaster asks me to fill my name in on the roll. The reason for this is to
 - a. make sure I paid.
 - b. check my certification number.
 - c. see if I have a buddy.
 - d. make sure everyone's aboard after each dive.
- The best entry is usually the
 - a. giant stride.
 - b. seated back roll.
 - c. easiest one.
- I should stay well away from the boat propeller at all times, even when the engine isn't running.
 - True
 - False

Knowledge Review Three continued

15. My buddy and I are diving from a boat in mild to moderate current. There is a line from the back of the boat where we'll enter, which leads to the mooring line at the front of the boat. The purpose of the line leading to the mooring line is to
- a. provide a backup to the mooring line.
 - b. allow us to swim to it if we surface away from the boat.
 - c. guide our descent to the bottom.
 - d. let us pull ourselves to the mooring line.
16. My buddy and I surface and the boat is not in sight, nor is there a float and we are beyond sight of shore. We should inflate our BCDs, deploy our surface signaling devices and stay together.
- True
 - False
17. Training that expands and develops my skills in preventing and managing problems include:
- a. PADI Digital Underwater Photographer.
 - b. PADI Rescue Diver.
 - c. PADI Emergency Oxygen Provider.
 - d. Emergency First Response Primary and Secondary Care courses.
18. At the surface, I have a problem. If I have not already done so, the first thing I should do is
- a. make myself buoyant (inflate BCD and/or drop weights).
 - b. ask for help.
 - c. relax and avoid overexertion.
19. A diver at the surface begins to struggle. He has wide, unseeing eyes and he has pushed off his mask. His BCD isn't inflated and he doesn't inflate it when the divemaster calls for him to do so. This diver is _____. To help, I should first _____.
- a. in control; encourage the diver to relax
 - b. in control; tow the diver
 - c. out of control; provide encouragement
 - d. out of control; make myself and the diver buoyant (inflate BCD/drop weights)
20. With an unresponsive diver underwater, the primary concern is _____. Once at the surface, besides establishing buoyancy and calling for help, the primary concern is _____.
- a. replacing the mouthpiece, towing to safety rapidly
 - b. getting the victim to the surface, checking for breathing and providing rescue breaths if the victim isn't breathing
 - c. compressing the torso, providing emergency oxygen
21. While diving, I begin to feel exhausted and air-starved because I have been swimming strenuously. I should
- a. descend slightly.
 - b. signal "stop" and rest.
 - c. immediately ascend.
 - d. switch to an alternate air source.
22. In helping an unresponsive diver, after you check for breathing and provide CPR as needed (once out of the water), which of the following has the highest priority?
- a. Contact emergency medical care.
 - b. Give the diver emergency oxygen.
 - c. Keep the diver warm.
 - d. Write down what happened.
23. Although it shouldn't have happened, on a dive at 10 metres/30 feet, I fail to watch my SPG and run out of air. I don't have a pony bottle or self-contained ascent bottle. My buddy is about 12 metres/40 feet away, and has an alternate second stage. My best option is probably to
- a. make a normal ascent.
 - b. ascend using an alternate air source.
 - c. make a controlled emergency swimming ascent.
 - d. make a buoyant emergency ascent.
24. Any diver who has been unresponsive in or under water requires medical examination, even if the person seems fully recovered.
- True
 - False
25. At a minimum, I should have ____ visual and ____ audible signaling devices.
- a. 1, 1
 - b. 2, 1
 - c. 1, 2
 - d. 2, 2
26. My buddy and I are underwater within 6 metres/20 feet of our float with a locally-recognized dive flag. We hear a boat, and it sounds close and is getting closer.
- a. This isn't an issue. The flag will keep the boat at a safe distance.
 - b. We should stay deep enough to be safe. The boater may not see or recognize the flag.

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Knowledge Review Four

Some questions may have more than one correct answer. Choose all that apply.

- During an underwater cleanup, my buddy and I fill a large mesh utility bag with several kilograms/pounds of garbage. We should
 - attach the bag to our gear.
 - carry the bag in our hands.
- I have a bit of a cold but feel I can manage the dive well enough, so it is okay to dive.
 - True
 - False
- Exertion from swimming hard, carrying equipment, climbing a ladder, long walks wearing gear, and heat stress from wearing an exposure suit in a hot climate can lead to heart attack in predisposed individuals. These factors can also cause problems for people with other cardiovascular conditions.
 - True
 - False
- Before diving, I should refrain from using
 - alcohol.
 - tobacco.
- Medications can create problems when diving, so I should use prescription drugs and over-the-counter medications with caution. Any drug that affects my judgment, thinking and/or reactions should generally not be used before diving.
 - True
 - False
- It is recommended that pregnant women do not dive.
 - True
 - False
- As a new PADI Open Water Diver, I should refresh my dive skills with a PADI Scuba Review after _____ of inactivity.
 - one month
 - six months
 - one year
 - five years
- One reason it is important to be certified as a PADI Enriched Air Diver, or under the supervision of a PADI Enriched Air Instructor, before using enriched air nitrox is to avoid oxygen toxicity problems.
 - True
 - False
- During a dive, I begin to have a headache, feel ill and dizzy. Are these possible symptoms of contaminated air?
 - Yes
 - No
- To avoid contaminated air, I should have my cylinder filled only at reputable scuba air sources.
 - True
 - False
- The two primary factors that influence how much nitrogen dissolves into my body tissues during a dive are _____ and _____.
 - depth, time
 - temperature, time
 - depth, temperature
- If I exceed established depth and time limits while diving and then surface, bubbles can form in my body tissues, causing decompression sickness.
 - True
 - False
- After a dive, a diver has numbness, tingling and weakness in the arms. Are these possible signs/symptoms of DCS?
 - Yes
 - No
- Secondary factors thought to contribute to DCS include
 - age.
 - cold.
 - injuries.
 - poor fitness/high body fat
- A no stop dive means I can, _____ the dive, ascend directly to the surface without stopping if necessary (although I would normally plan a safety stop).
 - for the first half of
 - for the last half of
 - at any time during
- If I am planning a dive to 12 metres/40 feet, my no stop limit will be _____ than my no stop limit for a dive to 10 metres/30 feet.
 - longer
 - shorter
- Exceeding my computer or table's ascent rate may increase my risk of DCS.
 - True
 - False
- On a repetitive dive, for a given depth my no stop limits will be _____ those of the first dive.
 - longer than
 - shorter than
 - the same as

Knowledge Review Four continued

19. I must use the same dive computer the entire day of diving, on all dives, and not share it with another diver.
- True
 - False
20. During a dive with my dive computer, my buddy and I will turn the dive based on the first limit we reach: remaining no stop time or air supply turn point.
- True
 - False
21. When diving with a computer, it is recommended that I
- a. dive well within its limits.
 - b. follow the most conservative computer – mine or my buddy's.
 - c. start at the deepest point and progress shallower.
 - d. ascend slowly and make a safety stop.
22. During a dive, my dive computer fails, and I'm not using a backup. I should
- a. continue the dive based on my buddy's computer.
 - b. ascend, make a safety stop and end the dive.
 - c. stay for the duration we planned before the dive.
23. One reason it is important to have environmentally-friendly dive skills is to preserve the natural beauty for other divers.
- True
 - False

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Knowledge Review Five

Some questions may have more than one correct answer. Choose all that apply.

- My buddy and I have just finished a dive to 15 metres/50 feet for 60 minutes. We want to return to the same site and depth and stay another 60 minutes. We can _____ to see about how long we have to remain at the surface to have enough no stop time.
 - a. wait and check our no stop times on our computers periodically
 - b. use the dive computer plan mode, if our computers have them,
 - c. use a dive planning app
 - d. check the RDP Table or eRDPML
- Going to altitude after diving may be a problem because
 - a. dive computers read too deep at altitude.
 - b. oxygen toxicity problems result from the thinner air.
 - c. most decompression models are based on surfacing at sea level.
- I've just finished a single no stop dive with my buddy. We have not been diving in the past several days, and this is the only dive we make. Based on current recommendations, the minimum surface interval before we fly is
 - a. 6 hours.
 - b. 12 hours.
 - c. 18 hours.
 - d. 24 hours.
- I need to use special altitude diving procedures when diving at an altitude greater than
 - a. 150 metres/500 feet.
 - b. 300 metres/1000 feet.
 - c. 600 metres/2000 feet.
 - d. 3000 metres/10,000 feet.
- If I am cold or exercise a lot during a dive, I may surface with more nitrogen than calculated by my dive computer or dive tables.
 - True
 - False
- At the end of a dive, my dive buddy's foot gets tangled in an abandoned fishing net. It takes five minutes to get free, but that delays our ascent making us exceed our no stop limit. This means that before we surface, we will have to make a(n) _____ stop to return our nitrogen level from outside the accepted limits.
 - a. safety
 - b. emergency decompression
- On a dive boat, after coming aboard two divers discover they accidentally surfaced without making an emergency decompression stop. They should _____, and not dive for at least 24 hours.
 - a. re-enter the water and make the stops
 - b. exercise and drink fluids
 - c. relax, breathe oxygen and check themselves for DCS symptoms
- In an emergency decompression situation, I find I won't have enough air to complete all the required stop time. I should
 - a. stay at the stop until out of air, then make a controlled emergency swimming ascent.
 - b. surface immediately and not make the stop at all.
 - c. stop as long as I can, but save enough air to surface and exit safely.
- To help a diver with suspected decompression illness, I should
 - a. monitor the diver's breathing and provide CPR as necessary.
 - b. contact emergency medical care.
 - c. have the diver sit or stand as much as possible.
 - d. provide emergency oxygen.
- Nearly all cases of decompression illness require treatment
 - a. in the water.
 - b. in a recompression chamber.
 - c. with bubble-dissolving drugs.
- During a dive, I feel I'm having trouble thinking clearly. I should
 - a. carefully continue.
 - b. signal my buddy and ascend to a shallower depth.
- On a standard underwater compass, the magnetic north needle
 - a. points to magnetic north.
 - b. indicates my travel direction.
 - c. points south on a reciprocal course.
 - d. is absent.
- My buddy and I want to travel in a straight line using a compass, I should point the _____ in our desired travel direction, then rotate the _____ until the _____ is/are over the _____.
 - a. lubber line, magnetic north needle, heading references
 - b. magnetic north needle, bezel, index marks, lubber line
 - c. heading references, bezel, lubber line, magnetic north needle
 - d. lubber line, bezel, index marks, magnetic north needle
- As a PADI Open Water Diver, I have been trained to a maximum depth of _____ (or the actual depth I reached, if shallower).
 - a. 12 metres/40 feet
 - b. 18 metres/60 feet
 - c. 24 metres/80 feet
 - d. 30 metres/100 feet

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