



Sample Dive Plan Calculations

The assumption is you will always start as a Current Tissue Code (CTC) A, diving at sea level (which means Level 1 tables) and **UNLESS STATED OTHERWISE** using normal air to breathe (21%). The first 5 questions are simply looking up data – the latter 5 actual dive planning.

Question 1

What is your Surfacing Code (SC) if you dive for 37 mins at 12 mtrs?

Answer:

- Look down 'DEPTH' column to 12 mtrs
- Trace right along row to 37 mins
- Trace down to row called 'SURFACING CODE'
- **SC is 'C'**

Question 2

How long can you dive to 21 mtrs if you want end your dive on Surfacing Code E

Answer:

- Sport Diver and above:
 - Move across 'SURFACING CODE' to 'E'
 - Trace up / down column 'DEPTH' to 21 mtrs
 - **Max dive time is 32 mins.**
- Ocean Diver:
 - **Dive can't be undertaken as they can only dive to 20 mtrs max.**

Question 3

Diving on Nitrox 32%, what is the maximum depth you could go to if you wanted a no-deco stop 65 mins dive

Answer:

- Sport Diver and above:
 - On '32% Oxygen – Level 1 Table, move across to column that sits above SC 'F' i.e. before going into decompression diving, on 'SURFACING CODE' column
 - Move upwards 'til you find at least 65 mins (in this case 80 mins)
 - Trace left to 'DEPTH' column
 - **Max Depth is 18 mtrs**
- Ocean Diver:
 - **REMEMBER – AS OCEAN DIVER MUST USE AIR TABLES!!**
 - Move across to column that sits above SC 'F' i.e. before going into decompression diving, on 'SURFACING CODE' column
 - Move upwards 'til you find at least 65 mins (in this case 74 mins)
 - Trace left to 'DEPTH' column
 - **Max Depth is 15 mtrs**

Question 4

Assuming you have completed your first dive and your Surface Code is D, what would be your new Current Tissue Code if you entered the water again 90 mins later?

Answer

- Go to 'SURFACE INTERVAL TABLE'
- Go down 'Last Dive SURFACING CODE' column to 'D'
- Trace right across row until you hit 90 mins in top row (white showing times)
- **New CTC is 'C'**

Question 5

Assuming you have completed your first dive and your Surface Code is F, what Surface Interval (SI) is needed to reduce your CTC to B?

Answer

- Go to 'SURFACE INTERVAL TABLE'
- Go down 'Last Dive SURFACING CODE' column to 'F'
- Trace right across row until you hit start of 'B'
- Trace upwards to white line showing times
- **Min SI is 4 hrs**

Question 6

- Dive 1 – 18 mtrs for 20 mins
- Surface Interval 2 hrs
- Dive 2 – 15 mtrs
- What is the maximum no stop time for dive 2?

Answer

- DIVE 1
 - On Level 1 Table A, look down 'DEPTH' column to 18 mtrs
 - Trace right along row to 20 mins (37 mins in this case)
 - Trace down to row called 'SURFACING CODE'
 - SC is 'D'
- NEW CTC
 - Go to SURFACE INTERVAL TABLE LEVEL 1
 - Go down 'Last Dive SURFACING CODE' column to 'D'
 - Trace right across row until you hit 90 mins in top row (white showing times)
 - New CTC is 'C'
- DIVE 2
 - On Level 1 Table C, look down 'DEPTH' column to 15 mtrs
 - Trace right along row to last time BEFORE the green section i.e. before going into decompression diving
 - **Max time is 24 mins**

Question 7

- Dive 1 – 20 mtrs for 35 mins
- Surface Interval – 80 mins
- Dive 2 – 25 mins with a max. of 3 mins deco stops
- What maximum depth can be dived?

Answer

- Sports Diver and above
 - DIVE 1
 - On Level 1 Table A, look down 'DEPTH' column to 20 mtrs (21 mtrs in this case)
 - Trace right along row to 35 mins (37 mins in this case)
 - Trace down to row called 'SURFACING CODE'
 - SC is 'F'
 - NEW CTC
 - Go to 'SURFACE INTERVAL TABLE'
 - Go down 'Last Dive SURFACING CODE' column to 'F'
 - Trace right across row until you hit 80 mins in top row (white showing times)
 - New CTC is 'D'
 - DIVE 2
 - On Level 1 Table D, look across 'DECOMPRESSION STOPS' to 3 mins
 - Move upwards 'til you find at least 25 mins (in this case 33 mins)
 - Trace left to 'DEPTH' column
 - **Max Depth is 12 mtrs**
- Ocean Diver:
 - **Cannot undertake this plan as can only do no-deco stop dives**

Question 8

- Dive 1 - 19 mtrs for 30 mins
- Dive 2 – 15 mtrs for 25 mins
- What minimum Surface Interval is required to be able to complete dive 2 as a no-deco stop dive?

Answer

- DIVE 1
 - On Level 1 Table A, look down 'DEPTH' column to 19 mtrs (21 mtrs in this case)
 - Trace right along row to 30 mins (32 mins in this case)
 - Trace down to row called 'SURFACING CODE'
 - SC is 'E'
- DIVE 2
 - On Level 1 Tables, start at Table F (highest CTC Ocean Divers can be), trace right along row to last time BEFORE the green section i.e. before going into decompression diving
 - Trace right along row to last time BEFORE the green section i.e. before going into decompression diving
 - Move upwards to check that you can do 15mtr dive for 20 mins. If not, move to Table E, D, C and so on until you can.
 - Table B is the first (48 mins max time)
 - So you need Surface Interval that reduces your 'SURFACING CODE' of 'E' to a new 'CURRENT TISSUE CODE' of 'B'
- NEW CTC
 - Go to 'SURFACE INTERVAL TABLE'
 - Go down 'Last Dive SURFACING CODE' column to 'E'
 - Trace right across row until you hit start of 'B'
 - Trace upwards to white showing times
 - **Min SI is 4 hrs**

Question 9

You enter the water at 8.30am and descend to 18 mtrs. You end the dive at 9.20am and decide to have a coffee. Another buddy pairing on the same dive trip asks you to help them into the water as they're carrying heavy camera equipment. Having waded in and out again – another coffee beckons. Your own buddy who has recently qualified as Ocean Diver, now wants to get back in the water so after a pee break (most important!!), you kit up and are ready to enter the water at 10.25. Your dive objective is a small fishing boat lying on its side in 12 mtrs of water and you need at least 15 mins to complete your trip all the way round.

Can you do this dive plan? If not, why not – and what would you need to alter do to be able to complete it?

Answer

- ***Don't get taken in by the waffle*** – read through the question carefully. You'll see you're actually only doing 2 dives – the coffees etc are a smoke-screen....and helping another buddy pair get in and out does not entail going under water (wading in and out is the clue) so no on-gassing to worry about. The other crucial fact is your buddy is an Ocean Diver so can only do non-deco stop dives. So....
- DIVE 1
 - Calculate dive time – 8.30 to 9.20 = 50 mins
 - On Level 1 Table A, look down 'DEPTH' column to 18 mtrs
 - Trace right along row to 50 mins (51mins in this case)
 - Trace down to row called 'SURFACING CODE'
 - SC is 'F'
- DIVE 2
 - On Level 1 Tables, start at Table F (highest CTC Ocean Divers can be), trace right along row to last time BEFORE the green section i.e. before going into decompression diving
 - Move upwards to check that you can do 12mtr dive for 15 mins. If not, move to Table E, D, C and so on until you can.
 - Table C is the first (24 mins max time)
- NEW CTC
 - You now need to know the minimum SI to move to a new CTC of 'C'
 - Go to 'SURFACE INTERVAL TABLE'
 - Go down 'Last Dive SURFACING CODE' column to 'E'
 - Trace right across row until you hit start of 'C'
 - Trace upwards to white showing times
 - Min SI to get to a 'C' is 90 mins
- SURFACE INTERVAL
 - You exited water at 9.20 and want to go back in at 10.25 – SI is only 55 mins.

- **So no you can't do the dive as planned – you have to extend your SI to 10.50**

Question 10

Diving on Nitrox 36%, you carry out your first dive to 30 mtrs for 50 mins. You plan to do a second dive for 15 mins on the same site to see whatever you missed on the first. But to do the second dive AND try and miss the rush-hour traffic home, you realise that you can only afford an 80 min Surface Interval.

What deco stops would you have to make on each dive?

Answer

- Sports Diver and Above:
 - DIVE 1
 - On '36% Oxygen - Level 1 Table A', look down 'DEPTH' column to 30 mtrs
 - Trace right along row to 50 mins (56 mins in this case)
 - Trace down to row called 'SURFACING CODE'
 - SC is 'G'
 - **Dive 1 Deco Stops = 3 mins @ 6mtrs**
 - NEW CTC
 - Go to 'SURFACE INTERVAL TABLE'
 - Go down 'Last Dive SURFACING CODE' column to 'G'
 - Trace right across white line showing times until you reach 80 mins
 - Trace downwards to identify new CTC 'D'
 - DIVE 2
 - On '36% Oxygen - Level 1 Table D', look down 'DEPTH' column to 30 mtrs
 - Trace right along row to 15 mins (16 mins in this case)
 - Trace down to row called 'SURFACING CODE'
 - SC is 'G'
 - **Dive 2 Deco Stops = 12 mins @ 6mtrs**
- Ocean Diver:
 - **Cannot undertake this plan as can only dive to max. 20 mtrs on a no-deco stop plan**