

Military-Veterans Advocacy

Written Testimony for the Record in Support of: H.R. 299

**Submitted to the United States Senate Veterans Affairs Committee,
August 1, 2018**



**Commander John B. Wells, USN (Retired),
Executive Director**

Introduction

Distinguished Chairman Johnny Isakson, Ranking Member Jon Tester and other members of the Committee, thank you for the opportunity to present the Association's views on; HR 299, the Blue Water Navy Vietnam Veterans Act of 2017.

About Military-Veterans Advocacy

Military-Veterans Advocacy Inc. (MVA) is a tax exempt IRC 501[c][3] organization based in Slidell, Louisiana that works for the benefit of the armed forces and military veterans. Through litigation, legislation and education, MVA seeks to obtain benefits for those who are serving or have served in the military. In support of this, MVA provides support for various legislation on the State and Federal levels as well as engaging in targeted litigation to assist those who have served.

Along with the Blue Water Navy Vietnam Veterans Association, Inc (BWNVVA) and the Fleet Reserve Association (FRA), MVA has been the driving force behind the Blue Water Navy Vietnam Veterans Act (HR 299). Working with Members of Congress and United States Senators from across the political spectrum, MVA and BWNVVA provided technical information and support to sponsors who have worked tirelessly to partially restore the benefits stripped from the Blue Water Navy veterans sixteen years ago. HR 299 passed the House of Representatives by a bi-partisan and unanimous vote of 382-0.

Military-Veterans Advocacy's Executive Director Commander John B. Wells USN (Ret.)

MVA's Executive Director, Commander John B. Wells, USN (Retired) has long been viewed as the technical expert on HR 299. A 22 year veteran of the Navy, Commander Wells served as a Surface Warfare Officer on six different ships, with over ten years at sea. He possessed a mechanical engineering subspecialty, was qualified as a Navigator and for command at sea, and served as the Chief Engineer on several Navy ships. As Chief Engineer, he was directly responsible for the water distillation and distribution system. He is well versed in the science surrounding this bill and is familiar with all aspects of surface ship operations. This includes the hydrological effect of wind, tides and currents.

Since retirement, Commander Wells has become a practicing attorney with an emphasis on military and veterans law. He is counsel on several pending cases concerning the Blue Water Navy and has filed amicus curiae briefs in other cases. He has tried cases in state, federal, military and veterans courts as well as other federal administrative tribunals. Since 2010 he has visited virtually every Congressional and Senatorial offices to discuss the importance of enacting a bill to partially restore benefits to those veteran who served in the bays, harbors and territorial seas of the Republic of Vietnam. He is also recognized in the veterans community as the subject matter expert on this matter.

Historical Background Surrounding HR 299

In the 1960's and the first part of the 1970's the United States sprayed over 12,000,000 gallons of a chemical laced with 2,3,7,8-Tetrachlorodibenzodioxin (TCDD) and nicknamed Agent Orange over southern Vietnam. This program, code named Operation Ranch Hand, was designed to defoliate areas providing cover to enemy forces. Spraying included coastal areas and the areas around rivers and streams that emptied into the South China Sea. By 1967, studies initiated by the United States government proved that Agent Orange caused cancer and birth defects. Similar incidence of cancer development and birth defects have been documented in members of the United States and Allied armed forces who served in and near Vietnam.

Throughout the war, the United States Navy provided support for combat operations ashore. This included air strikes and close air support, naval gunfire support, electronic intelligence, interdiction of enemy vessels and the insertion of supplies and troops ashore. Almost every such operation was conducted within the territorial seas.

The South China Sea is a fairly shallow body of water and the thirty fathom curve (a fathom is six feet) extends through much of the area designated in the bill. The gun ships would operate as close to shore as possible. The maximum effective range of the guns required most operations to occur within a few thousand yards of shore.

It was common practice for the ships to anchor while providing gunfire support. Digital computers were not yet in use and the fire control systems used analog computers. By anchoring, the ship's crew was able to achieve a more stable fire control solution, since there was no need to factor in their own ship's course and speed. It was also common for ships to steam up and down the coast at high speeds to respond to call for fire missions, interdict enemy sampans and other operational requirements.

Agent Orange Act of 1991.

In 1991, the Congress passed and President George H. W. Bush signed, the Agent Orange Act of 1991, Pub.L. 102-4, Feb. 6, 1991, 105 Stat. 11. This federal law required VA to award benefits to a veteran who manifests a specified disease and who "during active military, naval, or air service, served in the Republic of Vietnam during the period beginning on January 9, 1962, and ending on May 7, 1975."

The Department of Veterans Affairs (hereinafter VA) drafted regulations to implement the Agent Orange Act of 1991 and defined "service in the Republic of Vietnam" as "service in the waters offshore and service in other locations if the conditions of service involved duty or visitation in the Republic of Vietnam." 38 C.F.R. § 3.307(a)(6)(iii) (1994). This was in contrast to a previous definition which defined "service in the Republic of Vietnam" as "service in the waters offshore, or service in other locations if the conditions of service involved duty or visitation in Vietnam." 38 C.F.R. § 3.313 (1991). These regulations allowed the presumption of

exposure throughout the Vietnam Service Medal area, the dark solid line marked on the Exhibit. Under this definition, a ballistic missile submarine was covered as were the aircraft carriers on Yankee Station and submarines conducting operations in the Gulf of Tonkin in an area of the coast where no Agent Orange was sprayed. These ships would not be covered under HR 299.

In 1997 the VA General Counsel issued a precedential opinion excluding service members who served offshore but not within the land borders of Vietnam. The opinion construed the phrase "served in the Republic of Vietnam" as defined in 38 U.S.C. § 101(29)(A) not to apply to service members whose service was on ships and who did not serve within the borders of the Republic of Vietnam during a portion of the "Vietnam era." The opinion stated that the definition of the phrase "service in the Republic of Vietnam" in the Agent Orange regulation, 38 C.F.R. § 3.307(a)(6)(iii), "requires that an individual actually have been present within the boundaries of the Republic to be considered to have served there," and that for purposes of both the Agent Orange regulation and section 101(29)(A), service "in the Republic of Vietnam" does not include service on ships that traversed the waters offshore of Vietnam absent the service member's presence at some point on the landmass of Vietnam."

After lying dormant for a few years, this General Counsel opinion was incorporated into a policy change that was published in the Federal Register during the last days of the Clinton Administration. The final rule was adopted in Federal Register in May of that year. Comments by the VA concerning the exposure presumption recognized it for the "inland" waterways but not for offshore waters.

Historically the VA's Adjudication Manual, the M21-1 Manual, allowed the presumption to be extended to all veterans who had received the Vietnam service medal, in the absence of "contradictory evidence." In a February 2002 revision to the M21-1 Manual, the VA incorporated the VA General Counsel Opinion and the May 2001 final rule and required a showing that the veteran had set foot on the land or entered an internal river or stream. This "boots on the ground" requirement is in effect today.

One exception to this rule deals with Non-Hodgkins Lymphoma. A punctuation difference in the regulation allows the VA to exclude Navy veterans suffering from other Agent Orange related illnesses.

Hydrological Effect

The Agent Orange that was sprayed over South Vietnam was mixed with petroleum. The mixture washed into the rivers and streams and discharged into the South China Sea. In addition, the riverbanks were sprayed continuously resulting in direct contamination of the rivers. The dirt and silt that washed into the river can be clearly seen exiting the rivers and entering the sea. This is called a discharge "plume" and in the Mekong River it is considerable. Although the Mekong has a smaller drainage area than other large rivers, it has approximately 85% of the sediment load of the Mississippi. In two weeks, the fresh water of the Mekong will travel several

hundred kilometers. Notably, the Agent Orange dioxin dumped off the east coast of the United States was found in fish over one hundred nautical miles from shore.

Eventually, the Agent Orange/petroleum mixture would emulsify and fall to the seabed. Evidence of Agent Orange impingement was found in the sea bed and coral of Nha Trang Harbor. During the Vietnam War, the coastline, especially in the harbors and within the thirty fathom curve was a busy place with military and civilian shipping constantly entering and leaving the area in support of the war effort. Whenever ships anchored, the anchoring evolution would disturb the shallow seabed and churn up the bottom. Weighing anchor actually pulled up a small portion of the bottom. The propeller cavitation from military ships traveling at high speeds, especially within the ten fathom curve, impinged on the sea bottom. This caused the Agent Orange to constantly rise to the surface. Tidal effects mixed the contaminated river water with the salt water in the territorial seas. The contaminated water was ingested into the ship's evaporation distillation system which was used to produce water for the boilers and potable drinking water. Navy ships within the South China Sea were constantly steaming through a sea of Agent Orange molecules.

Judicial Impact

This matter first came before the judiciary in 2006. *Haas v. Nicholson*, 20 Vet. App. 257. The *Haas* court found that the veteran who was operating off the shoreline, was within the scope of the statutory definition and invalidated the VA "boots on the ground" policy. The Federal Circuit reversed in *Haas v. Peake*, 525 F.3d 1168, 1196 (Fed. Cir. 2008) *reh'g denied Haas v. Peake*, 544 F.3d 1306, 1309 (Fed. Cir. 2008).

This Court of Appeals for Veterans Claims considered another Blue Water case, as it applied to bays and harbors, in *Gray v. McDonald*, 27 Vet.App. 313 (2015). The *Gray* Court found the Secretary's exclusion of Da Nang from their inland waterways definition was arbitrary and capricious. *Gray*, 27 Vet. App. at 313. The *Gray* Court went on to note that the VA failed to address their rationale in excluding areas where brown water and blue water mix, such as Da Nang Harbor. *Gray, supra.*, at 322. Stopping short of applying a definition of inland waters, the *Gray* Court ruled that they would vacate the BVA decision and remand the matter to the VA. The Secretary did not file an appeal. The Secretary failed to follow the *Gray* court's guidance. The February 5, 2016 regulation was the same policy used to deny the veteran's benefits. A petition for review pursuant to 38 U.S.C. § 502 was filed in the Court of Appeals for the Federal Circuit. The petition was dismissed due to lack of jurisdiction. *Gray v. MacDonald*, 830 F.3d 570 (D.C. Cir. 2016). A petition for rehearing *en banc* was also denied 7-3. *Gray v. Sec'y of Veterans Affairs*, 884 F.3d 1379 (Fed. Cir. 2018). A petition for *certiorari* is pending in the Supreme Court of the United States.

Additionally, there is a case pending in the United States Court of Appeals for the Federal Circuit, *Procopio v. O'Rourke*, 17-1821. Briefing and oral argument have completed. *Procopio* asks the court to extend the presumption of exposure to the territorial seas.

Procopio, assuming it is decided in favor of the veterans, will not resolve the problem. *Procopio* would extend the presumption of exposure to the territorial seas which is roughly the equivalent of the designated area in HR 299. But without the geographic designations incorporated into the bill, the VA would be free to define the territorial seas as they desired. Accordingly, HR 299 is needed to fix the area to be covered.

Cost of HR 299

The Congressional Budget Office has scored HR 299 at \$894 million over ten years. This includes \$882 million for the Blue Water component and the remainder to provide expanded benefits to Korea DMZ veterans and additional Spina Bifida benefits. HR 299 also called for an increase in loan guarantee fees which will generate \$1.165 billion over ten years. Accordingly, HR 299 will result in a \$271 million dollar savings to the government over ten years.

The loan guarantee fees vary depending on whether there is a down payment and whether it is the first or subsequent use of the home loan benefit. The increased rates will vary between 1.25% and 3.30% and are expected to cost the veteran \$2.00 to \$2.50 per month. Disabled veterans will generally be exempt from the provision. The cap on jumbo loans will be removed which will allow the VA to provide a guarantee on the full amount of the loans. The disabled veteran exemption for jumbo loans will not apply however, unless the veteran is 100% disabled.

The bill and the offset have generally received the support of the Veterans Service Organizations. The exception seems to be a real estate agent, George Varrato II, a Phoenix Realtor has objected to the offset although he does not object to the bill. Varrato contacted the undersigned several weeks ago but was unable to provide any other acceptable offset significant enough to finance these benefits. He was also unable to provide information on how many veterans would be affected by the fees.

Although Military-Veterans Advocacy is unhappy with any offset for additional veterans benefits, the reality of the situation is that they are required by Pub. L. 111-139. Of the various offsets reviewed by MVA, this offset seems the most innocuous.

Common VA Misrepresentations

The VA has consistently opposed the expansion of the presumption of exposure. On October 24, 2017, however, former Secretary Shulkin expressed support for HR 299 in his testimony before the House Veterans Affairs Committee. Given the previous opposition, and the lack of a confirmed Secretary to articulate the present VA position, MVA feels compelled to address previous VA misrepresentations.

Some common misrepresentations are as follows:

Misrepresentation: The Australian distillation study was never peer reviewed.

MVA Comment: The report was presented for review at the 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs and is published in the associated peer reviewed conference proceedings: Müller, J.F., Gaus, C., Bundred, K., Alberts, V., Moore, M.R., Horsley, K., 2001. It was also reviewed and confirmed by two separate committees of the Institute of Medicine.

Misrepresentation: There is no evidence that the evaporation distillation process used by the Australians was the same as used on United States ships.

MVA Comment: All steam ships used a similar system which remained in place until the 1990's. In addition many of the Australian gun ships were the United States *Charles F. Adams* class and were built in the United States. Both the MVA Executive Director and another experienced Navy Chief Engineer have reviewed the Australian report. They concluded the distillation systems therein were the same as used by United States Navy ships.

Misrepresentation: There is no evidence that Navy ships distilled potable water.

MVA Comment: Ships carried a reserve of potable water but it was normally replenished by distillation daily or every other day. A Destroyer sized ship carried less than 20,000 gallons for a crew size between 275 and 300 men. The water was used for cooking, cleaning, laundry, showering and drinking. As Vietnam is in the tropics, significant hydration was necessary. In addition, the warmer sea injection temperature below the 17th parallel resulted in less efficient water production. Water hours, where showers were limited or banned, was common during tropical deployments. Water was constantly being distilled to meet the requirements for boiler feed water and potable water.

Misrepresentation: The Australian study monitored the reverse osmosis system rather than the evaporation distillation system used on United States Navy ships.

MVA Comment: The only time that the reverse osmosis system was used in the Australian study was to purify the baseline sample prior to adding the solids and sediments consistent with the estuarine waters of Vietnam. The actual distillation process, as confirmed above, was the same distillation system used by United States Navy ships.

Misrepresentation: The IOM found more pathways of Agent Orange exposure for land based veterans than those at sea.

MVA Comment: Technically this is true but irrelevant. The IOM noted that discharges from rivers and streams was a pathway unique to the Blue Water Navy and that it was one of the plausible pathways of exposure. The number of possible pathways is not determinative. What is conclusive is that pathways of exposure existed.

Misrepresentation: The IOM could not quantify any Agent Orange in the water.

MVA Comment: This again is a red herring. Any amount of exposure can do damage to

the human body. The IOM also found that the evaporation distillation process enriched the dioxin by a factor of ten. This is consistent with Australian studies showing a higher cancer incidence among Navy veterans and a Center for Disease Control study showing a higher incidence of Non-Hodgkins Lymphoma among Navy veterans.

Misrepresentation: Ships operating hundreds of miles off shore who were not exposed will be given the presumption of exposure.

MVA Comment: Not true. This bill applies only to the territorial seas which at their widest point off the Mekong extends out to 90 nautical miles from the mainland. In the central and northern part of the Republic of Vietnam, the territorial seas would only extend 20-30 nautical miles from the mainland.

Misrepresentation: Submarines would come into the area to obtain the Vietnam Service Medal for their crews and would be eligible for the presumption.

MVA Comment: One ballistic missile submarine the *USS Tecumseh*, SSBN 628 did enter the VSM area for that purpose but there is no indication that they entered the territorial seas. Submarines operating off of Haiphong or near Hainan Island would not have been within the territorial seas and are not covered by HR 299.

Misrepresentation: No Agent Orange was sprayed over water.

MVA Comment: Not true. MVA is in possession of statements from witnesses that ships anchored in Da Nang Harbor were inadvertently sprayed as the "Ranch Hand" planes made their approach to the airfield. Additionally, there are anecdotal reports of defective spray nozzles resulting in spray over the ships at anchor or operating in the South China Sea. Finally, the IOM recognized that the offsetting winds would blow some spray intended for the landmass over water.

Misrepresentation: Navy regulations prevented ships from distilling water within ten miles of land.

MVA Comment: This statement was taken out of context from a preventive medicine manual and was not a firm requirement. Ships were encouraged to not distill potable water near land because of the possibility of bacteriological contamination. Commanding Officers could allow potable water to be distilled close to land and often delegated that authority to the Chief Engineer. The IOM noted that the recommendation contained in the manual was widely ignored. More importantly, the recommendations in the manual did not apply to the distillation of feed water for use in the boilers. Since the same equipment was used for potable water, distillation to feed water would contaminate the entire system down to the final discharge manifold. Additionally, feed water used in auxiliary systems was discharged to the bilges via low pressure drains. Crew members would also be exposed to Agent Orange residue while cleaning and inspecting the watersides of boilers and the steam sides of condensers as well as other equipment.

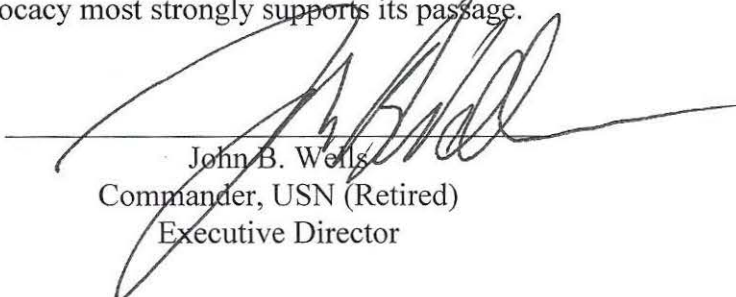
Misrepresentation: The IOM confirmed that there was no likelihood of exposure to

herbicides in Da Nang Harbor.

MVA Comment: The court in *Gray v. McDonald*, took the VA to task for this statement noting that this was not the conclusion of the IOM.

Conclusion.

MVA urges the adoption of HR 299. It will restore the earned benefits to tens of thousands of Navy veterans that were taken from them over a decade ago. This bill is supported by virtually all veterans organizations including the American Legion, Veterans of Foreign Wars, Vietnam Veterans of America, Reserve Officers Association, Fleet Reserve Association, Military Officers Association of America, Association of the U. S. Navy and other groups. We have always enjoyed the support of the Military Coalition. Enactment of this legislation is overdue and Military-Veterans Advocacy most strongly supports its passage.



John B. Wells
Commander, USN (Retired)
Executive Director

STRAIGHT BASELINES

VIETNAM

New Chart No. 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

SOUNDINGS IN FATHOMS

For Symbols and Abbreviations, see Chart No. 1

WATER DEPTHS

Scale 1:200,000, 1:100,000, 1:50,000, 1:25,000, 1:12,500, 1:6,250, 1:3,125, 1:1,562, 1:781, 1:390, 1:195, 1:97, 1:48, 1:24, 1:12, 1:6, 1:3, 1:1, 1:0.5, 1:0.25, 1:0.125, 1:0.0625, 1:0.03125, 1:0.015625, 1:0.0078125, 1:0.00390625, 1:0.001953125, 1:0.0009765625, 1:0.00048828125, 1:0.000244140625, 1:0.0001220703125, 1:0.00006103515625, 1:0.000030517578125, 1:0.0000152587890625, 1:0.00000762939453125, 1:0.000003814697265625, 1:0.0000019073486328125, 1:0.00000095367431640625, 1:0.000000476837158203125, 1:0.0000002384185791015625, 1:0.00000011920928955078125, 1:0.000000059604644775390625, 1:0.0000000298023223876953125, 1:0.00000001490116119384765625, 1:0.000000007450580596923828125, 1:0.0000000037252902984619140625, 1:0.00000000186264514923095703125, 1:0.000000000931322574615478515625, 1:0.0000000004656612873077392578125, 1:0.00000000023283064365386962890625, 1:0.000000000116415321826934814453125, 1:0.0000000000582076609134674072265625, 1:0.00000000002910383045673370361328125, 1:0.000000000014551915228366851806640625, 1:0.0000000000072759576141834259033203125, 1:0.00000000000363797880709171295166015625, 1:0.000000000001818989403545856475830078125, 1:0.0000000000009094947017729282379150390625, 1:0.00000000000045474735088646411895751953125, 1:0.000000000000227373675443232059478759765625, 1:0.0000000000001136868377216160297393798828125, 1:0.00000000000005684341886080801486968994140625, 1:0.000000000000028421709430404007434844970703125, 1:0.0000000000000142108547152020037174224853515625, 1:0.00000000000000710542735760100185871124267578125, 1:0.000000000000003552713678800500929355621337890625, 1:0.0000000000000017763568394002504646778106689453125, 1:0.00000000000000088817841970012523233890533447265625, 1:0.000000000000000444089209850062616169452667236328125, 1:0.0000000000000002220446049250313080847263336181640625, 1:0.00000000000000011102230246251565404236316680908203125, 1:0.000000000000000055511151231257827021181583404541015625, 1:0.0000000000000000277555756156289135105907917022705078125, 1:0.00000000000000001387778780781445675529539585113525390625, 1:0.000000000000000006938893903907228377647697925567626953125, 1:0.0000000000000000034694469519536141888238489627838134765625, 1:0.00000000000000000173472347597680709441192448139190673828125, 1:0.000000000000000000867361737988403547205962240695953369140625, 1:0.0000000000000000004336808689942017736029811203479766845703125, 1:0.00000000000000000021684043449710088680149056017398834228515625, 1:0.000000000000000000108420217248550443400745280086994171142578125, 1:0.0000000000000000000542101086242752217003726400434970855712890625, 1:0.00000000000000000002710505431213761085018632002174854278564453125, 1:0.000000000000000000013552527156068805425093160010874271392822265625, 1:0.000000000000000000006776263578034402712546580005437135691411328125, 1:0.0000000000000000000033881317890172013562732900027185678457056640625, 1:0.00000000000000000000169406589450860067813664500135928392285283203125, 1:0.000000000000000000000847032947254300339068322500679641961426416015625, 1:0.0000000000000000000004235164736271501695341612503398209807132080078125, 1:0.00000000000000000000021175823681357508476708062516991049035660400390625, 1:0.000000000000000000000105879118406787542383540312584955245178302001953125, 1:0.0000000000000000000000529395592033937711917701562924776225891510009765625, 1:0.00000000000000000000002646977960169688559588507814623881129457550048828125, 1:0.000000000000000000000013234889800848442797942539073116905647287750244140625, 1:0.0000000000000000000000066174449004242213989712695365584528236438751220703125, 1:0.00000000000000000000000330872245021211069948563476827922641182193756103515625, 1:0.000000000000000000000001654361225106055349742817384139613205910968780517578125, 1:0.0000000000000000000000008271806125530276748714086920698066029554843902587890625, 1:0.00000000000000000000000041359030627651383743570434603490330147774219512939453125, 1:0.000000000000000000000000206795153138256918717852173017451650738871097564697265625, 1:0.0000000000000000000000001033975765691284593589260865087258253694355487823486328125, 1:0.00000000000000000000000005169878828456422967946304325036291268471777197617436640625, 1:0.000000000000000000000000025849394142282114839731521625181456342358885988087183203125, 1:0.0000000000000000000000000129246970711410574198657608125907281711794429940435916015625, 1:0.00000000000000000000000000646234853557052870993288040629536408558972149702179578125, 1:0.000000000000000000000000003231174267785264354966440203147682042794860748510897890625, 1:0.0000000000000000000000000016155871338926321774832201015734102139724303742554489453125, 1:0.0000000000000000000000000008077935669463160887416100507867051069862151871277244765625, 1:0.00000000000000000000000000040389678347315804437080502539335255349310759356386223828125, 1:0.0000000000000000000000000002019483917365790221854025126966762767465537967819311440625, 1:0.00000000000000000000000000010097419586828951109270125634833813837327689839096557203125, 1:0.000000000000000000000000000050487097934144755546350628174169069186638449195482786015625, 1:0.0000000000000000000000000000252435489670723777731753140870845345933192245977413930078125, 1:0.00000000000000000000000000001262177448353618888658765704354226729665961229887069650390625, 1:0.000000000000000000000000000006310887241768094443293788521771133364829806149435348251953125, 1:0.0000000000000000000000000000031554436208840472216468942608855666824149030747176741259765625, 1:0.00000000000000000000000000000157772181044202361082344713044278334120745153735883706298828125, 1:0.000000000000000000000000000000788860905221011805411723565221391670603725768679418531494140625, 1:0.0000000000000000000000000000003944304526105059027058617826106958353018628843397092657470703125, 1:0.00000000000000000000000000000019721522630525295135293089130534791765093144216685463287353515625, 1:0.0000000000000000000000000000000986076131526264756764654456526739588254657210834273164367678125, 1:0.00000000000000000000000000000004930380657631323783823272282633697941273286054171365821838390625, 1:0.000000000000000000000000000000024651903288156618919116361413168489706366430270856829109191953125, 1:0.0000000000000000000000000000000123259516440783094595581807065842448531832151354284145455959765625, 1:0.00000000000000000000000000000000616297582203915472977909035329212242659160756771420727279798828125, 1:0.000000000000000000000000000000003081487911019577364889545176646061213295803783857103636398994140625, 1:0.0000000000000000000000000000000015407439555097886824447725883230306066479018919285518181994970703125, 1:0.00000000000000000000000000000000077037197775489434122238629416151530332395094596427590909974853515625, 1:0.0000000000000000000000000000000003851859888774471706111931470807576516619754729821379545498742678125, 1:0.00000000000000000000000000000000019259299443872358530559657354037882583098773649106897727493713390625, 1:0.000000000000000000000000000000000096296497219381792652798286770189412915493868245534488637468566953125, 1:0.0000000000000000000000000000000000481482486096908963263991433850947064577469341227672443187342834765625, 1:0.00000000000000000000000000000000002407412430484544816319957169254735322887346706138362215936714173828125, 1:0.000000000000000000000000000000000012037062152422724081599785846273676614436733530691811079683570869140625, 1:0.0000000000000000000000000000000000060185310762113620407998929231368383072183667653459055398417854345703125, 1:0.00000000000000000000000000000000000300926553810568102039994646156841915360918338267295276992089271728515625, 1:0.000000000000000000000000000000000001504632769052840510199973230784209576804591691336476384960446358642578125, 1:0.000000000000000000000000000000000000752316384526420255009986615392104788402295584566823819480223179322140625, 1:0.0000000000000000000000000000000000003761581922632101275009933076960523942011477922834119097401115896610703125, 1:0.00000000000000000000000000000000000018807909613160506375049665384802619710057389614170595487005579483053515625, 1:0.0000000000000000000000000000000000000940395480658025318750243269240130985502869480708529774350278974152678125, 1:0.00000000000000000000000000000000000004701977403290126593751216346200654927514347403542648871751394870763390625, 1:0.000000000000000000000000000000000000023509887016450632968756081731003274637571737017713244358756974353816953125, 1:0.0000000000000000000000000000000000000117549435082253164843780408655016373187858685088566221793784871769084765625, 1:0.00000000000000000000000000000000000000587747175411265824218902043275081865939293425442831108968924358845423828125, 1:0.000000000000000000000000000000000000002938735877056329121094510216375409329696467127214155544844621794227119140625, 1:0.0000000000000000000000000000000000000014693679385281645605472551081877046648482335636070777724223108971135595703125, 1:0.00000000000000000000000000000000000000073468396926408228027362755409385233242411678180353888621115544855677978515625, 1:0.000000000000000000000000000000000000000367341984632041140136813777046926166212058390940176943105577724278389892578125, 1:0.0000000000000000000000000000000000000001836709923160205700684068885234630831060291954700884715527888621391949462890625, 1:0.00918354961580