

THE 12 BERSERKERS SOLUTION - BOOTY CALL

The contents and owners of each chest may be distributed as shown below (per the logic described subsequently). Index into the treasure item in each chest by its gold coins and silver coins to make two clues: A PIRATE'S LOOT and HAIL OR RING UP, the answers to which combine to make the final answer BOOTY CALL.

Label the rows of chests 1-3 from the top down and the columns A-D left to right. By [8], the Jeweled Tiara's chest is at the center of a 5-chest cross shape; this shape must be centered on 2B or 2C. In either case, the arm of the cross containing the chest of Hrólfr the Unerring's chest cannot be to the left of the chest with the Jeweled Tiara, as that would place it in 2A or 2B. However, by [4], Hrólfr's chest must be in column C or D, because there's a maximum of one other berserker's chest that could be to his right in the same row. Similarly by [4], Haki the Valiant's chest must be in column D. By [7] we know that the chest of either Haklangr or Hrómundr must also be in column D (in fact, by [4], we know that the chest of Haklangr the Bearded can't be in column D, so it must be Hrómundr the Hard's, with Haklangr's in column A). [3] prohibits the chests of three berserkers with the same initial from being in the same column, so Hrólfr's chest must be in 2C, with the Jeweled Tiara chest in 2B, and the chests with the Brass Amphora, Painted Totem, and Strong Arrows in 1B, 2A, and 3B in some order. By [4], Haki's chest must be in 2D.

By the above, the Axhead Amulet's chest cannot be in 1B, 2A, or 2C. By [3] it can't be Hrólfr or Haki's chest, and by [10] it can't be in 1C, 1D, or anywhere in the bottom row. Therefore, it must be in 1A, with the Ceramic Ring's chest in 1C. By [3] 1A can't be Haklangr's chest, so by [7] that must be in 3A, with Hrómundr the Hard's in 1D. By [4] there must be three chests with alphabetically earlier epithets in chests 1A-1C, and by [3] that sequence can't begin with Hvitserkr or Harðrefill, so those chests must belong to, left to right, Svipdgar the Cold, Beigaðr the Feared, and Bödvar the Fierce.

By [3], the owner of the chest in 3D can't have the initial H. Vötrr must own the chest with the Brass Amphora (everyone else is excluded by [3], so that chest is somewhere in the cross shape. In fact, [9] excludes Vötrr's chest from the bottom row, so it must be in 2A. By elimination, 3D must be owned by Starólfr the Troublesome. [4] dictates the placement of the chests of Hvitserkr the Bold, Harðrefill the Callous,

1	A 5 A H AXHEAD AMULET Svipdgar Cold	B 1 P A PAINTED TOTEM Beigaðr Feared	C 6 I I CERAMIC RINGS Bödvar Fierce	D 11 R L RADIANT PEARL Hrómundr Hard
	2 12 A O BRASS AMPHORA Vötrr Mighty	8 T R JEWELLED TIARA Hjalti Stolid	2 E R BEARSKIN CAPE Hrólfur Unerring	7 S I MYSTIC SCROLL Haki Valiant
	3 9 L N STYGIAN BLADE Haklangr Bearded	4 O G STRONG ARROWS Hvitserkr Bold	3 O U UNOPENED CASK Harðrefill Callous	10 T P IRON EYEPATCH Starólfr Troublesome

and Hjalti the Stolid in 3B, 3C, and 2B respectively.

By [1] there are 12 distinct values of silver coin. Whatever their total, there are an equal number of gold coins. Together they total less than 160, so the total of the 12 values of silver coin must be less than 80. By [6], one silver value has factors of 3 and 4. This must be 12, as the next possibility, 24, is higher than the maximum allowed in [13]. With 12 in the mix, no other distinct value higher than 12 can be, as, using other minimums, that sums to 80 or higher ($\Sigma 10 = 55 + 12 + 13 = 80$). So the unique values of silver coins must run 1-12, summing to 78, with the unique values of gold being the same to sum to 78 as well. By [2], each half of the trunk array must contain 12 non-matching values, so that's 1-12 on each side.

By [6] and the above, the Radiant Pearl's chest holds 12 silver in either 1D or 2C. By [13], the chest with 23 coins must have 12 silver and 11 gold, which must be this same chest. Therefore, by [11], the Unopened Cask can't be in 2D, so it must be in 3C, forcing the Radiant Pearl's chest to be 1D, and placing the Mystic Scroll in 2D and Bearskin Cape in 2C. By [7] 2C and 1A have 4 silver and 3 silver respectively. By [9] Vötrr's chest must have 22 coins, which by elimination and [2] must be 12 gold and 10 silver.

By [12] the chests belonging to Harðrefill, Svipdgar, and Haklangr respectively contain

3 / 6 / 12, 4 / 8 / 16, or 5 / 10 / 20 coins (6 / 12 / 24 or higher violate the maximum possible for one chest). We can eliminate 3 / 6 / 12 as by [6] there's a chest with 3 coins in Row 1 with the 23 coin chest, and by [1] there can't be another. We can eliminate 5 / 10 / 20, because all the ways to make 5 coins in Harðrefill's chest violate [1] or [2]. Therefore, there must be 4 in Harðrefill (3 gold / 1 silver). The 3 (1 gold / 2 silver) in Row 1 must by [2] be in Beigaðr's chest. Svipdgar's chest contains 8 (5 gold, 3 silver). Haklangr's chest contains 16. From the amounts available for left-side chests, it must be 9 and 7 coins, silver and gold in some order.

The left-side 4-coin pouch can only be gold coins in Hvitserkr's chest. By [11] the Strong Arrow's can't go in Beigaðr's 3-coin chest, so they must be in Hvitserkr's, with an even amount of silver coins (placing the Painted Totem in Beigaðr's). By [9] there's a Row 3 chest with 18 coins, and Hvitserkr's can't add up to that much, so that must be Starólfr's, filled with the only possible combination: 10 gold / 8 silver. This leaves 6 as the only available amount of silver to complete Hvitserkr's chest, and completes the left-side chests by forcing 8 gold / 11 silver into Hjalti's chest.

By [9] and the above Haki's chest must contain 12 coins. The only available combination is 7 gold / 5 silver, which disambiguates the coin allotment in Haklangr's chest. 2 gold can only go in Hrólfr's chest, with the remaining 6 gold / 9 silver going in Bödvar's.