Senior Division

Solutions

1. $X_8 = BAD_{16} - 465_8 + 447_8 = 5655_8 - 465_8 + 447_8 = 5637_8$	1. 5637 ₈ or 5637
2. The indicated sum is B3CAE ₁₆ . This converts to: 101100111100101011110 ₂ . The number of 1's is 12.	2. 12
3. CAR returns the first element of the list. The list here has 3 elements. The first element is (2(3)).	3. (2(3))
4. $f(1) = f(3) + 1 = 14 + 1 = 15$ f(3) = f(5) + 3 = 11 + 3 = 14 f(5) = f(7) + 5 = 6 + 5 = 11 f(7) = 7 - 1 = 6	4. 15
5. $f(9, 4) = f(7, 8) + 1 = 1 - 11 = -10$ f(7, 8) = f(5, 16) + 1 = 1 - 12 = -11 f(5, 16) = f(2, 15) + 2 = 2 - 14 = -12 f(2, 15) = f(-1, 14) + 2 = 2 - 16 = -14 f(-1, 14) = -2 - 14 = -16	5. –10