```
    sum += x >> 2 & mask;  /* calculate the number of
    sum += x >> 3 & mask;  1's in each group */
    sum = sum + (sum >> 16); /* combine high and low order
                sums. Now, low order 16 bits consists of 4
                sums, each ranging from between 0 and 8 */
    sum = (sum & 0xF0F) + ((sum >> 4) & 0xF0F);
            /* split into two groups and sum */
    return (sum + (sum >> 8)) & 0x3F;
}
```