HW 8

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1)

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Coin change (int n, int k, int D[]) {
    int s[n+1];  s[0] = 0;

    for (int i=0; i<=n; i++)
        s[i] = ∞;

    for (int i = 1; i<=n; i++){
        for (int j=0; j<k; j++){
            if (D[j] <= i)
                int r = s[i - D[j]];
            if (res != ∞ && res+1 < s[i])
                s[i] = res+1;
        }
    }

    int count = n;
    while (n > 0){
        for (int j=0; j<k; j++){
            if (n - D[j] >= 0 && s[n - D[j]] + 1 == s[n])
                n = D[j];
        }
    }

    return s[count];
}
```

2) $z \to x = 7$

$z \to 5 = 2$

$z \to t = 7 - 2 = 5$

$z \to y = 7 - 2 + 8 = 13$