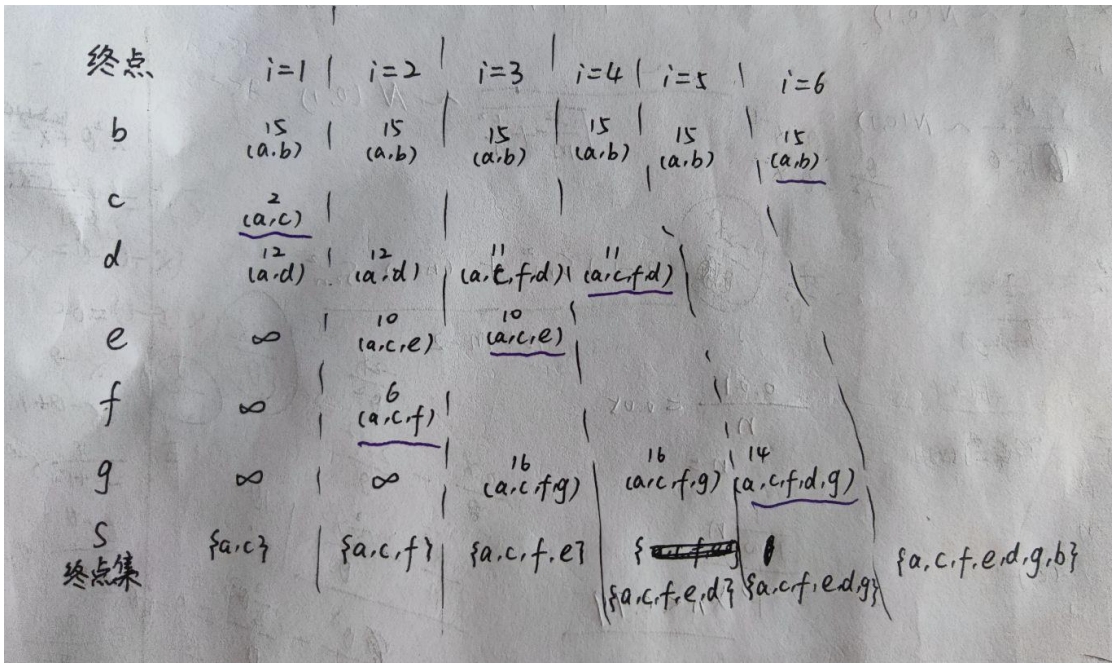
应用题



算法题

(3)

```
void shortestmax(AMGraph G, int v0)
{
    n = G.vexnum;
    for (v = 0;v < n;++v)
    {
        S[v] = false;
        D[v] = G.arcs[v0][v];
        if (D[v] < MaxInt)
            Path[v] = v0;
        else Path[v] = -1;
    }
    S[v0] = true;
    D[v0] = 0;
    for (i = 1;i < n;i++)
    {
        min = MaxInt;
        for (w = 0;w < n;++w)
            if (!S[w] && D[w] < min)
            {
                v = w;
                min = D[w];
            }
        S[v] = true;
        for (w = 0;w < n;++w)
            if (!S[w] && (D[v] + G.arcs[v][w] < D[w]))
```

```
            {
                D[w] = D[v] + G.arcs[v][w];
                Path[w] = v;
            }
    }
    max = D[0];
    for (i = 1;i < n;i++)
        if (D[i] > max)
        {
            max = D[i];
            k = i;
        }
    return k;
}
```

(5)

```
int visited[MAXSIZE]=false;
int length(ALGragh G, int i, int j, int k)
{
    if (i == j && k = 0)
        return 1;
    else if (k > 0)
    {
        visited[i] = true;
        for (p = G.vertices[i].firstarc;p;p = p->nextarc)
        {
            v = p->adjvex;
            if (!visited[v])
                if (length(G, v, j, k - 1))
                    return 1;
        }
        visited[i] = false;
    }
    return 0;
}
```