

020 乘法研讨会

Subtitle

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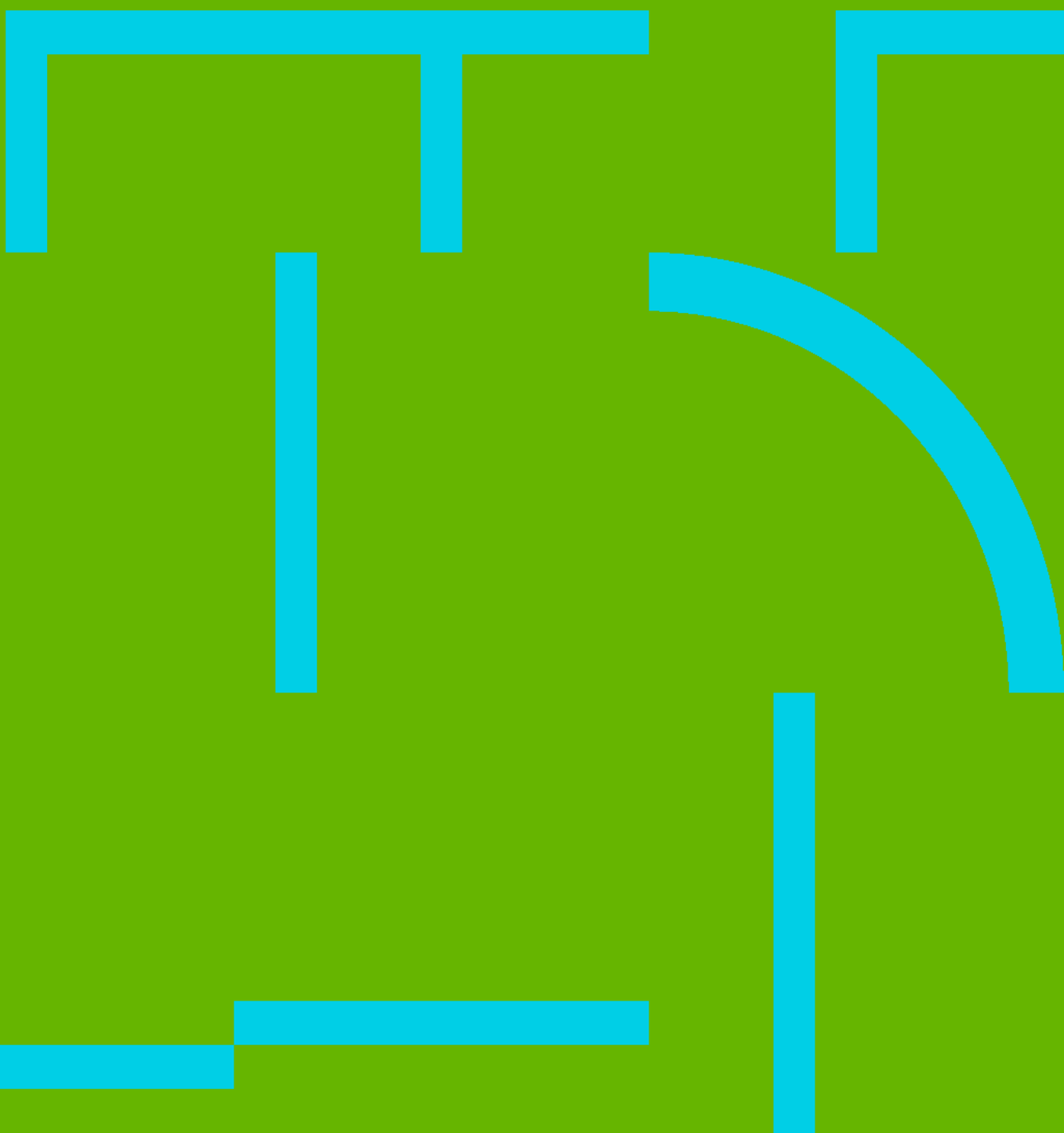


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020 乘法研讨会

优化目标: 15行109步

以第一个输入作为待相加的数，第二个输入为相加次数，可以优化代码行数。

15行136步

[snippet.asm](#)

```
-- HUMAN RESOURCE MACHINE PROGRAM --  
  
    JUMP    f  
a:   COPYFROM 2  
c:   OUTBOX  
f:   INBOX  
      COPYTO 0  
      COPYTO 2  
      INBOX  
      COPYTO 1  
      JUMPZ  c  
h:   BUMPDN 1  
      JUMPZ  a  
      COPYFROM 2  
      ADD    0  
      COPYTO 2  
      JUMP   h
```

28行107步

[snippet.asm](#)

```
-- HUMAN RESOURCE MACHINE PROGRAM --  
  
    JUMP    f  
z:   COPYFROM 9  
      JUMP   c  
a:   COPYFROM 2
```

```

c:
    OUTBOX
f:
    INBOX
    JUMPZ    i
    COPYTO  0
    COPYTO  2
    INBOX
    JUMPZ    c
    COPYTO  1
    SUB      0
    JUMPN    h
    COPYFROM 1
    COPYTO  2
    COPYFROM 0
    COPYTO  1
    COPYFROM 2
    COPYTO  0
h:
    BUMPDN  1
    JUMPZ    a
    COPYFROM 2
    ADD      0
    COPYTO  2
    JUMP     h
i:
    INBOX
    JUMP     z

```

废弃的

下面几段代码将第一个输入作为相加次数，导致多了几次存取，行数和效率都不好。

27行135步

[snippet.asm](#)

```

-- HUMAN RESOURCE MACHINE PROGRAM --

    JUMP     f
a:
    COPYFROM 2
    JUMP     c
b:
    COPYFROM 9
c:

```

```
OUTBOX
JUMP  e
d:
COPYFROM 0
COPYTO 2
COPYFROM 1
COPYTO 0
COPYFROM 2
COPYTO 1
JUMP  g
e:
f:
INBOX
COPYTO 0
INBOX
COPYTO 1
COPYTO 2
SUB 0
JUMPN  d
g:
h:
BUMPDN 0
JUMPN  b
JUMPZ  a
COPYFROM 2
ADD 1
COPYTO 2
JUMP  h
```

31行121步

[snippet.asm](#)

```
-- HUMAN RESOURCE MACHINE PROGRAM --

JUMP  f
a:
COPYFROM 2
JUMP  c
b:
COPYFROM 9
c:
OUTBOX
f:
INBOX
JUMPZ  i
COPYTO 0
INBOX
```

```
JUMPZ j
COPYTO 1
COPYTO 2
SUB 0
JUMPN d
h:
BUMPDN 0
JUMPN b
JUMPZ a
COPYFROM 2
ADD 1
COPYTO 2
JUMP h
i:
INBOX
JUMP b
j:
JUMP b
d:
COPYFROM 0
COPYTO 2
COPYFROM 1
COPYTO 0
COPYFROM 2
COPYTO 1
JUMP h
```

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