

# American Computer Science League

2020-2021 • Contest 1: Numeral Triangles • Intermediate Division

**PROBLEM:** Construct a Numeral Octal Triangle according to the following rules. You will be given three positive integers:  $s$ , a starting number;  $d$ , a delta (the amount by which to increase each number in the triangle); and  $r$  the number of rows. The numbers  $s$  and  $d$  will be in octal.

1. The first row contains the number  $s$ .
2. Each of the next rows has one more number than the previous row.
3. Each number in the triangle is  $d$  more than the previous number in the triangle.

Here are two examples of Numeral Octal Triangles:

start=2, delta=3, rows=5	start=221, delta=2, rows=4
<div><div>2</div><div>510</div><div>131621</div><div>24273235</div><div>4043465154</div></div>	<div><div>221</div><div>223225</div><div>227231233</div><div>235237241243</div></div>

**INPUT:** There are 5 lines of data. Each line has 3 positive integers,  $s$ ,  $d$ , and  $r$ . The numbers are separated by spaces and each is less than 1,000,000<sub>8</sub>. Recall that  $s$  and  $d$  are in octal.

**OUTPUT:** For each line of data, print the sum of all of the digits on the  $r$ th row of the Numeral Octal Triangle as a base 10 number. For example, the output for the above table on the left is:  
 $4 + 0 + 4 + 3 + 4 + 6 + 5 + 1 + 5 + 4 = 36$ .

**SAMPLE INPUT:**

```
2 3 5
221 2 4
1 4 20
10 10 10
3245 5 11
```

**SAMPLE OUTPUT:**

```
1. 36
2. 38
3. 230
4. 99
5. 178
```

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## TEST DATA

### TEST INPUT:

```
4567 7 65
3141 5 26
765 43 21
704 1776 20
77 7 100
```

### TEST OUTPUT:

1. 1038
2. 429
3. 329
4. 374
5. 1547