P7. A geometric series is a serial summation of terms with a constant ratio between successive terms. It can be generally represented as

$$s = \sum_{i=0}^{n-1} ar^i,$$

where a is a start term, r is the ratio, n is a number of terms. For example, s = 1 + 2/3 + 4/9 + 8/27 whose a = 1, r = 2/3, n = 4; s = 1/2 + 1/4 + 1/8 + 1/16 + 1/32 whose a = 1/2, r =1/2, n = 5. Write a program to compute the geometric series: ask a user for a, r, and n then compute the series and report the calculation.

Food for thought:

$$for\ 0 < r < 1, \sum_{i=0}^{n-1} ar^i = a \cdot \left(\frac{1-r^n}{1-r}\right) and \lim_{n\to\infty} \sum_{i=0}^{n-1} r^i = \frac{1}{1-r}.$$

Use the P7 template. (P7_template.py. The template is only to ensure the exact display format and allows smooth auto-grading.)

Example 1:

```
============================================================
a:2
r:0.8
n:5
series = 6.72
============================================================
a:1
r:1
n:8
series = 8.0
============================================================
```

Here is P7_template.py

```
"""
A geometric series is a serial summation of terms with
a constant ratio between successive terms.
It can be generally represented as
s = sum_{i=0}^{n-1} ar^i,
where a is a start term, r is the ratio,
n is a number of terms.
For example, s = 1 + 2/3 + 4/9 + 8/27 whose a = 1, r = 2/3, n = 4;
s = 1/2 + 1/4 + 1/8 + 1/16 + 1/32 whose a = 1/2, r =1/2, n = 5.
Write a program to compute the geometric series:
ask a user for a, r, and n then compute the series
and report the calculation.
"""

if __name__ == '__main__':

    # Write your code here.
    s = 0

    # Do not edit below this line.
    print('series = {:,.2f}'.format(s))
```