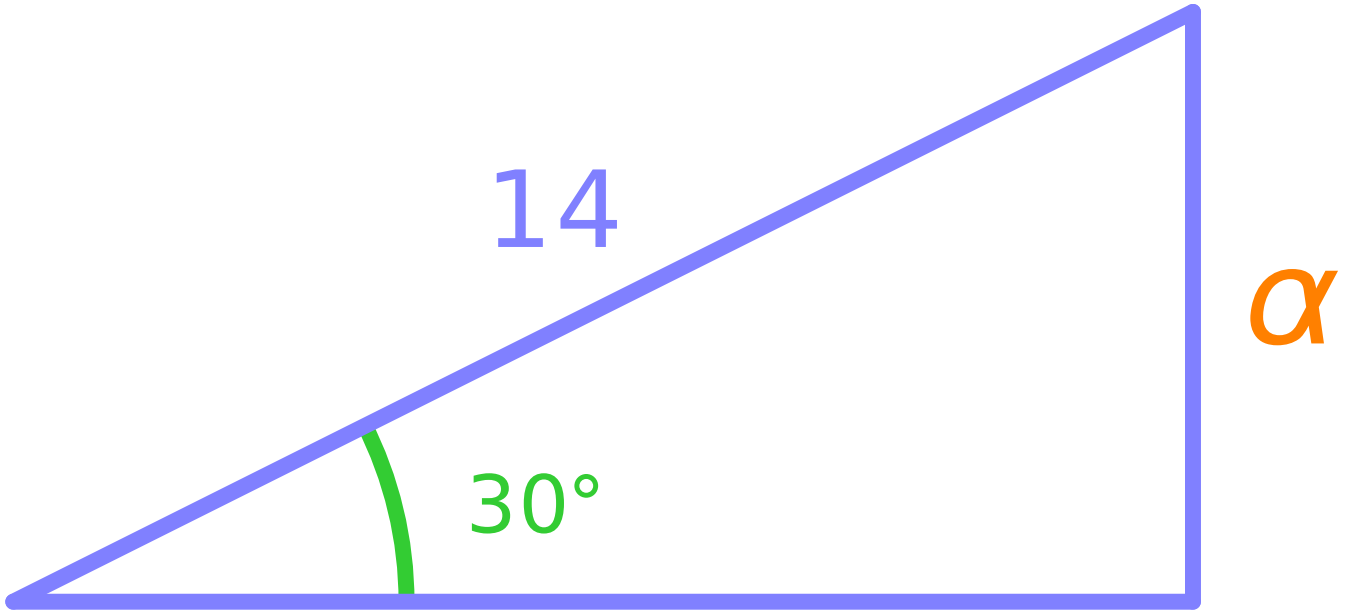
Mathematical Treasure Hunt

Solve the following mathematical puzzles to find a number for each Greek letter. Convert this number into a letter using the Cipher, and enter into the answer grid to reveal a word or phrase.

Some questions can be solved using information displayed in the Leighton Building, or other places on Campus.


14
α
30°

What is the y coordinate of the intersect of the two lines

$y = 2x$ and $y = -x + 6$

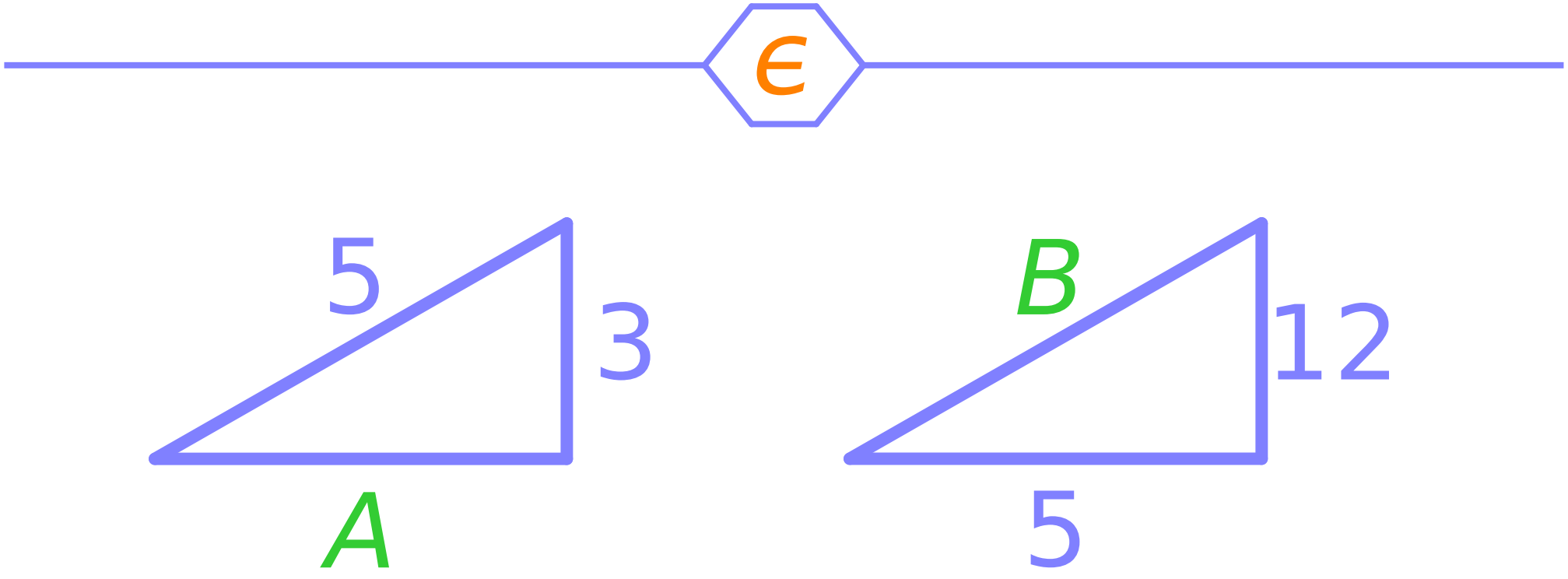
?

$$2\gamma^2 + 17\gamma + \gamma^2 - 30 = 15\gamma + 8 + 3\gamma^2$$

$$\gamma = ?$$

Find δ if $\delta > 0$ and

$$\delta^2 + \delta - 20 = 0.$$



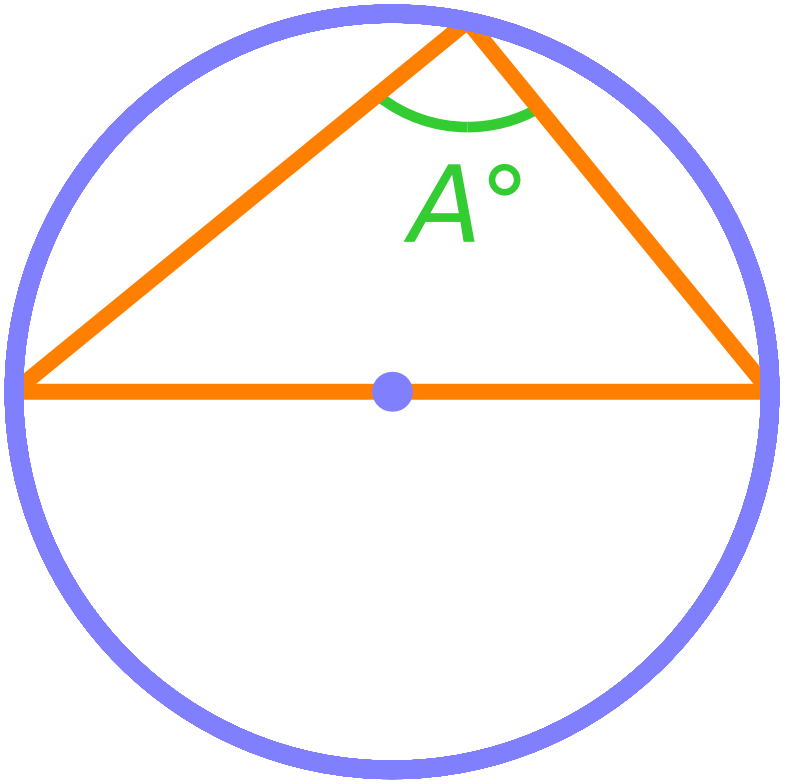
$$A + B = \epsilon$$

UCLan's sports centre is named after a local footballing legend

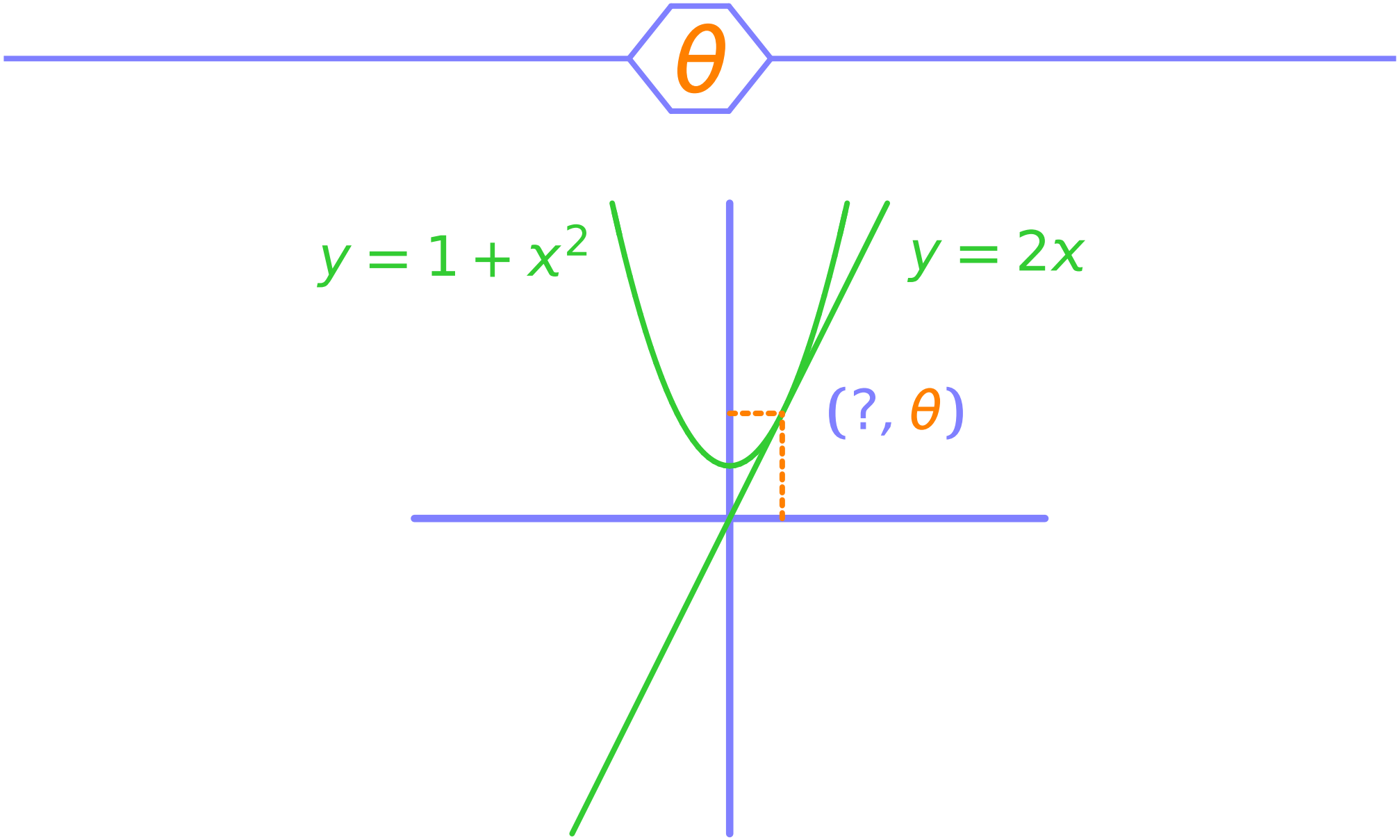
Sir ??? ???

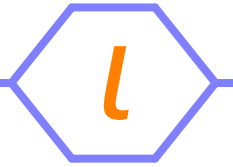
ζ = 5+ number of letters in his name

η



$$\frac{A}{5} = \eta$$

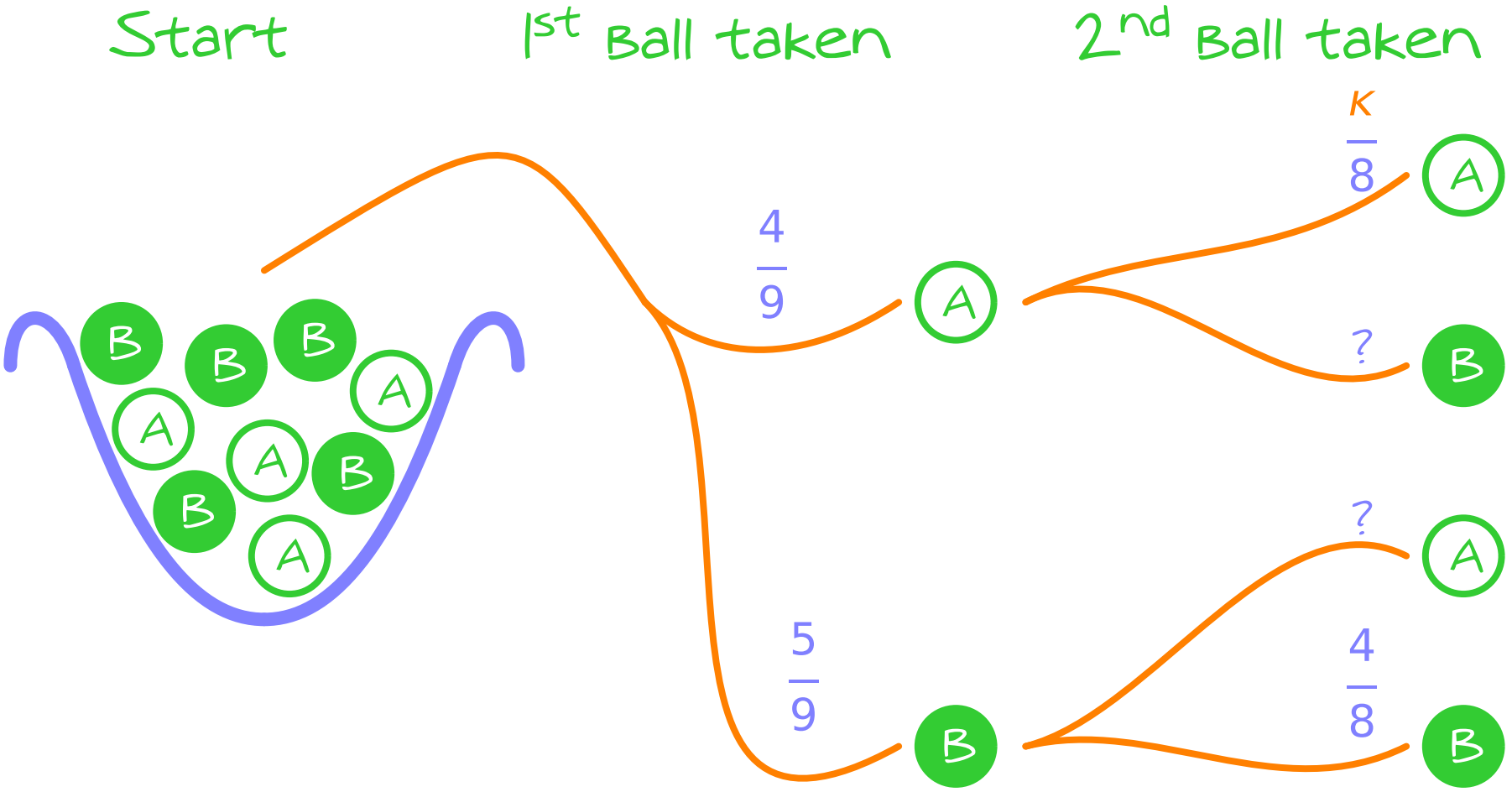

θ
$y = 1 + x^2$
$y = 2x$
$(?, \theta)$



UCLan was originally know as the Institute for the Diffusion of Knowledge.

$$\iota = \text{Last digit of}$$

$$\left(\frac{\text{Year of founding of institute}}{4} - 3\right)$$


Start
1st Ball taken
2nd Ball taken
B
B
B
A
A
A
B
B
A
4/9
5/9
A
B
K/8
?
?
4/8
A
B
A
B

Find λ where ...

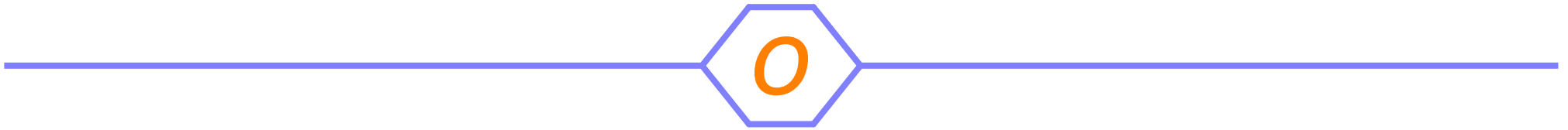
$$\left(\frac{3}{4}\right)^{\lambda} = 1.$$

The Leighton Building was officially opened on a day in May 1992.

μ = This day − 2.

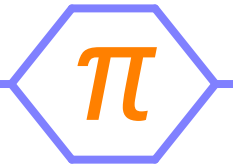
$$4, 7, 12, \nu, 28, 39$$

The Fibonacci Sequence starts 1, 1, 2. What is the 6^{th} term?



What is the missing prime factor of 36?

$$36 = 2 \times 3 \times 3 \times 0$$



Expand $(1 + 2x)^4$.

What is the coefficient of x?

$$\frac{\text{Number of days in a leap year}}{6} - 6\left(\text{Number of months with 31 days}\right)$$

$$\frac{12!}{11!} + \frac{4!}{2!}$$