

Angles in Polygons

Downloadable Resource –

Building shapes from triangles

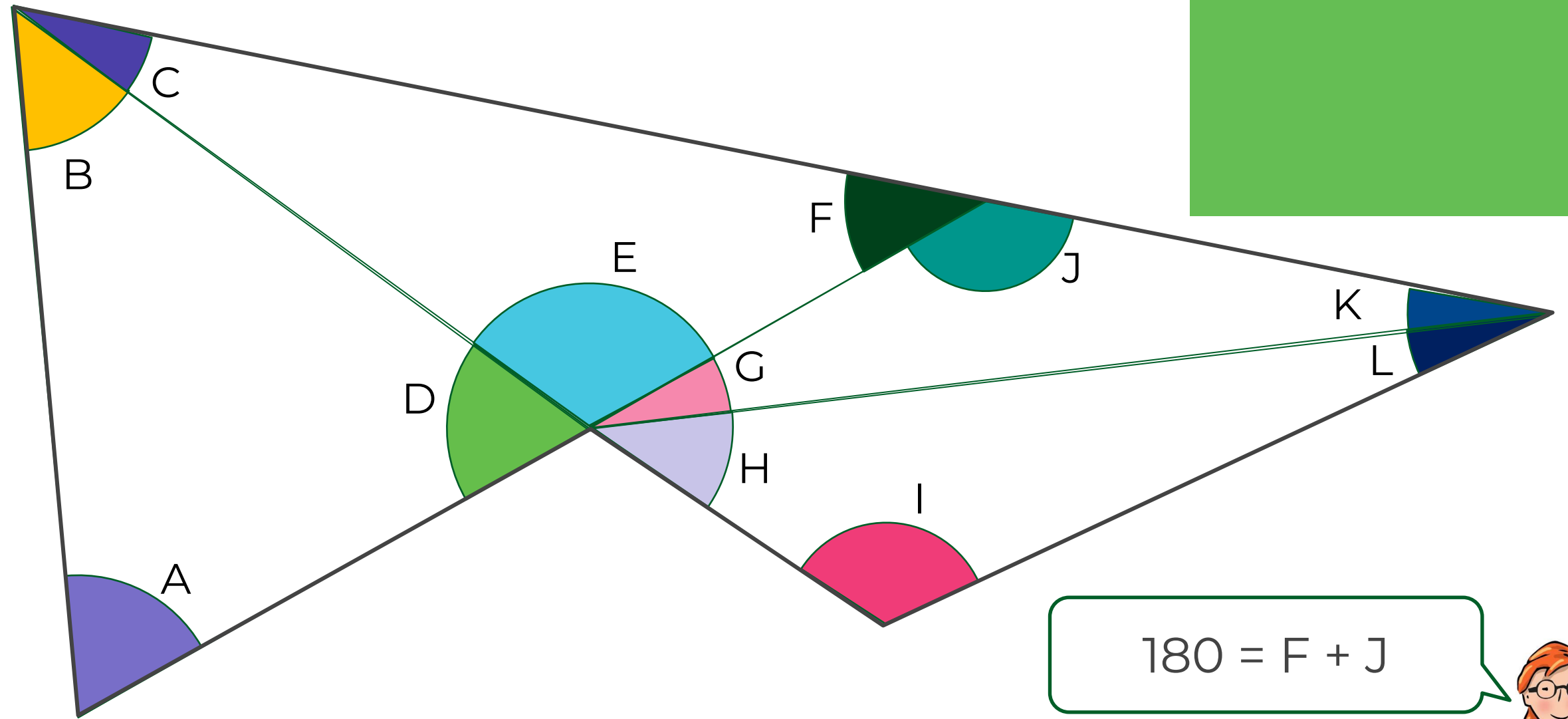
(Part II)



Try this

How many sums to 180° can you find in this diagram?

Cala and Yasmin have started with 2 suggestions.



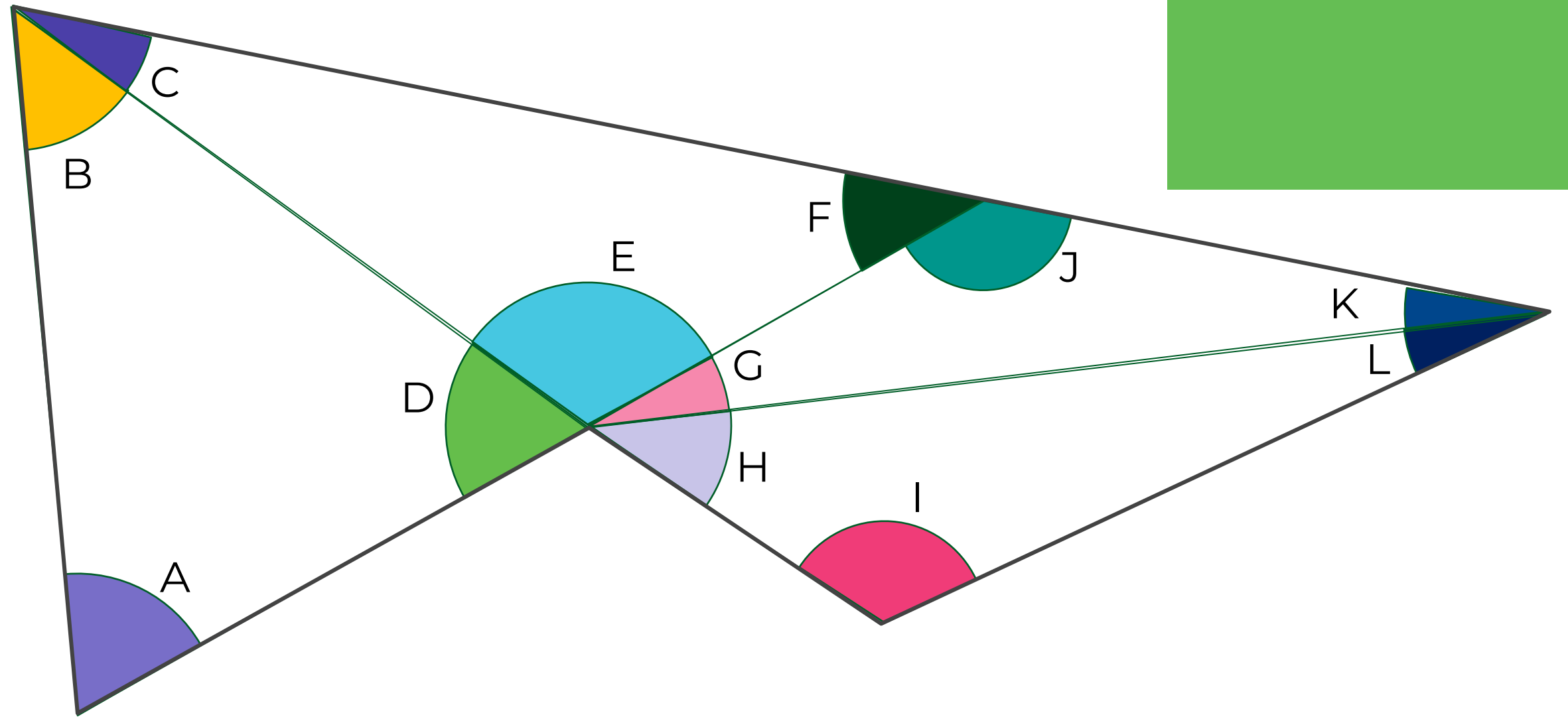
$$180 = F + J$$

$$A + B + C + F = 180$$



Connect

Lets categorise them now...



Interior angles in a triangle sum to 180 degrees.

E.g: $A + B + D$

Angles on a straight line sum to 180 degrees.

E.g: $E + G + H$

Compounding triangles.

E.g: $C + I + K + L$



Independent Task

Find the sum of each of the following angles

$$A + B + D = ?$$

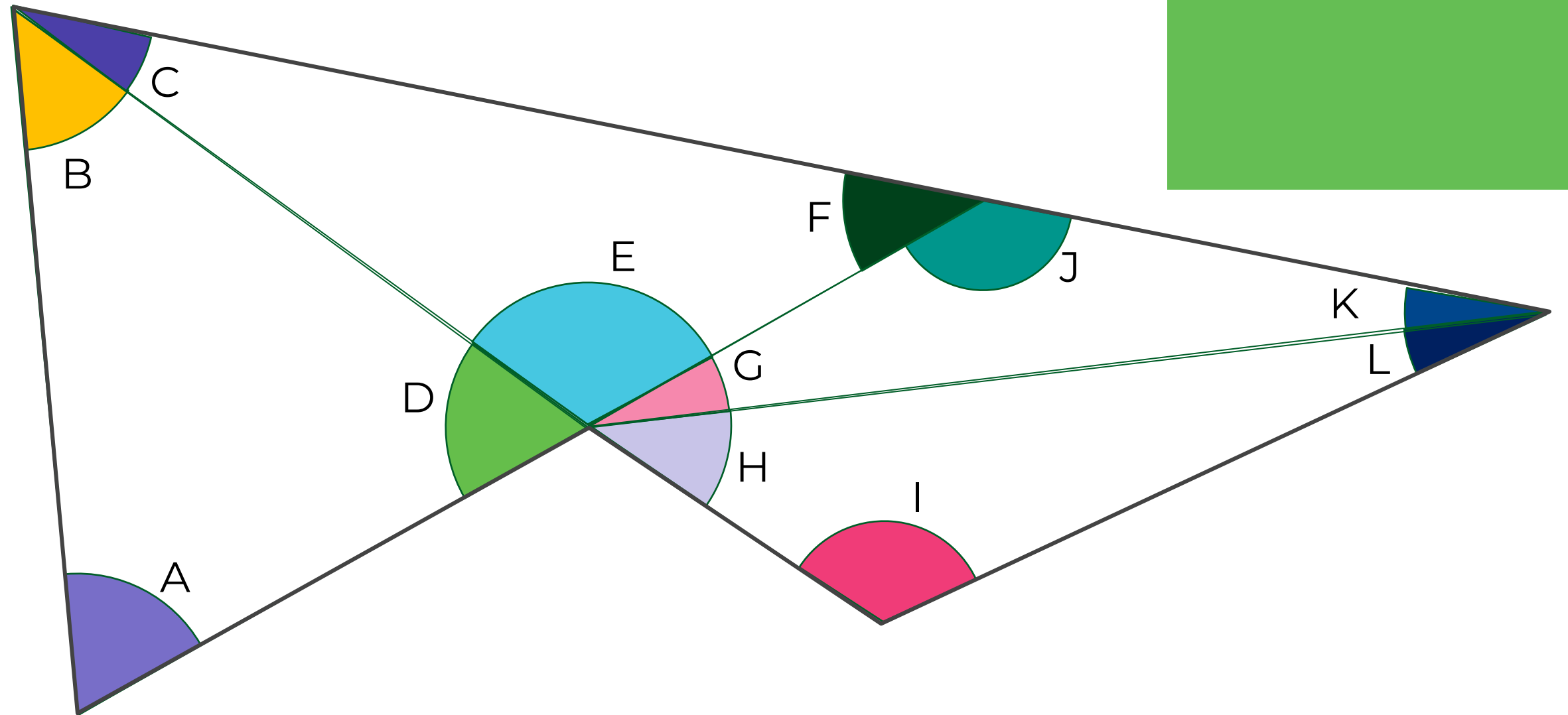
$$D + E = ?$$

$$A + B + D + F + J = ?$$

$$G + H + I + J + K + L = ?$$

$$A + B + C + D + E + F = ?$$

$$C + I + K + L = ?$$



Cala is working out $E + G + H + I + L$.
She says “ $E + G + H$ is 180 degrees, and $H + I + L$ is 180 degrees, so the total is 360 degrees”. Do you agree?



Explore

Find even more statements (some might not even sum to 180 degrees), by substituting equations to find even more.

