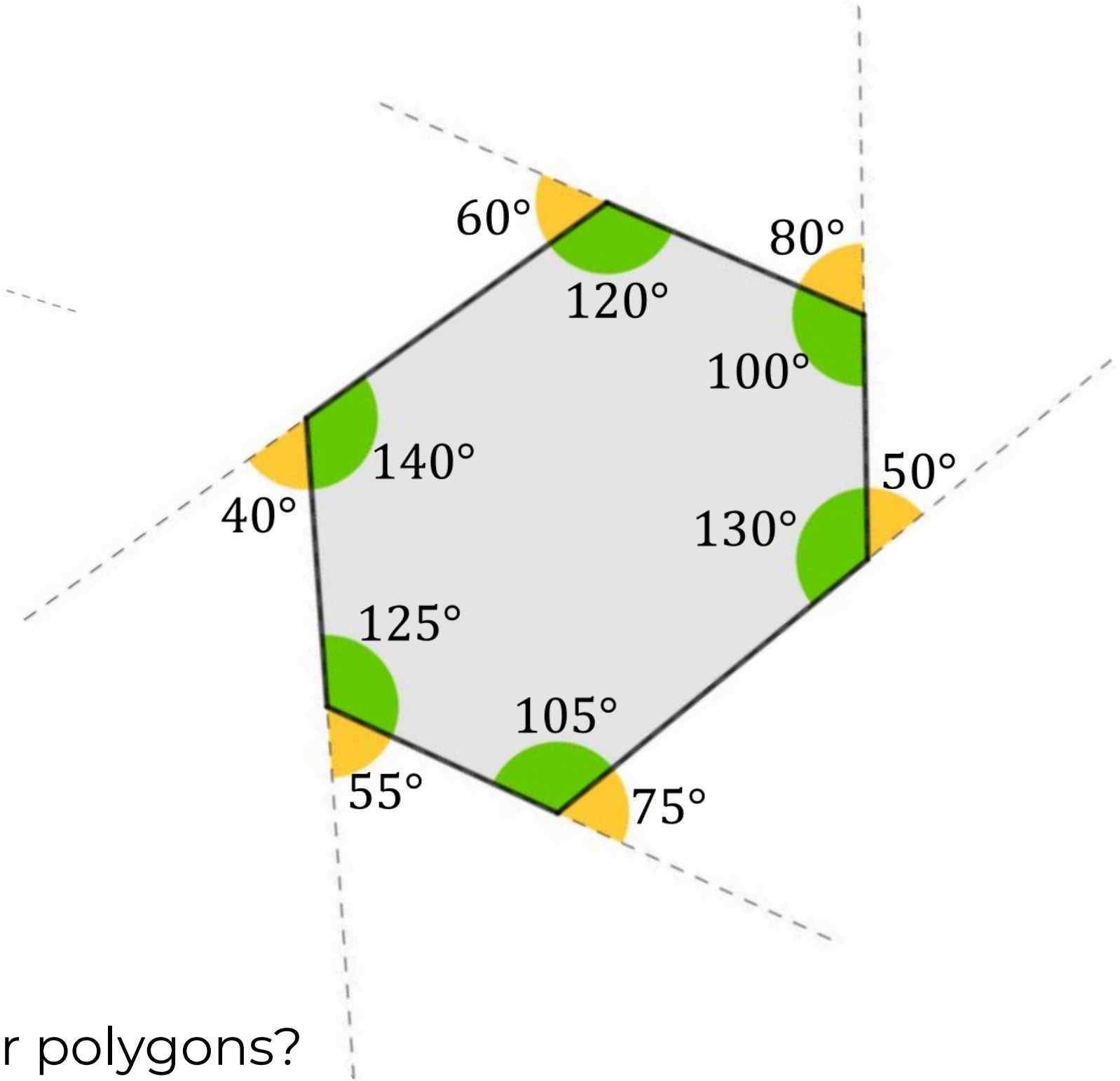
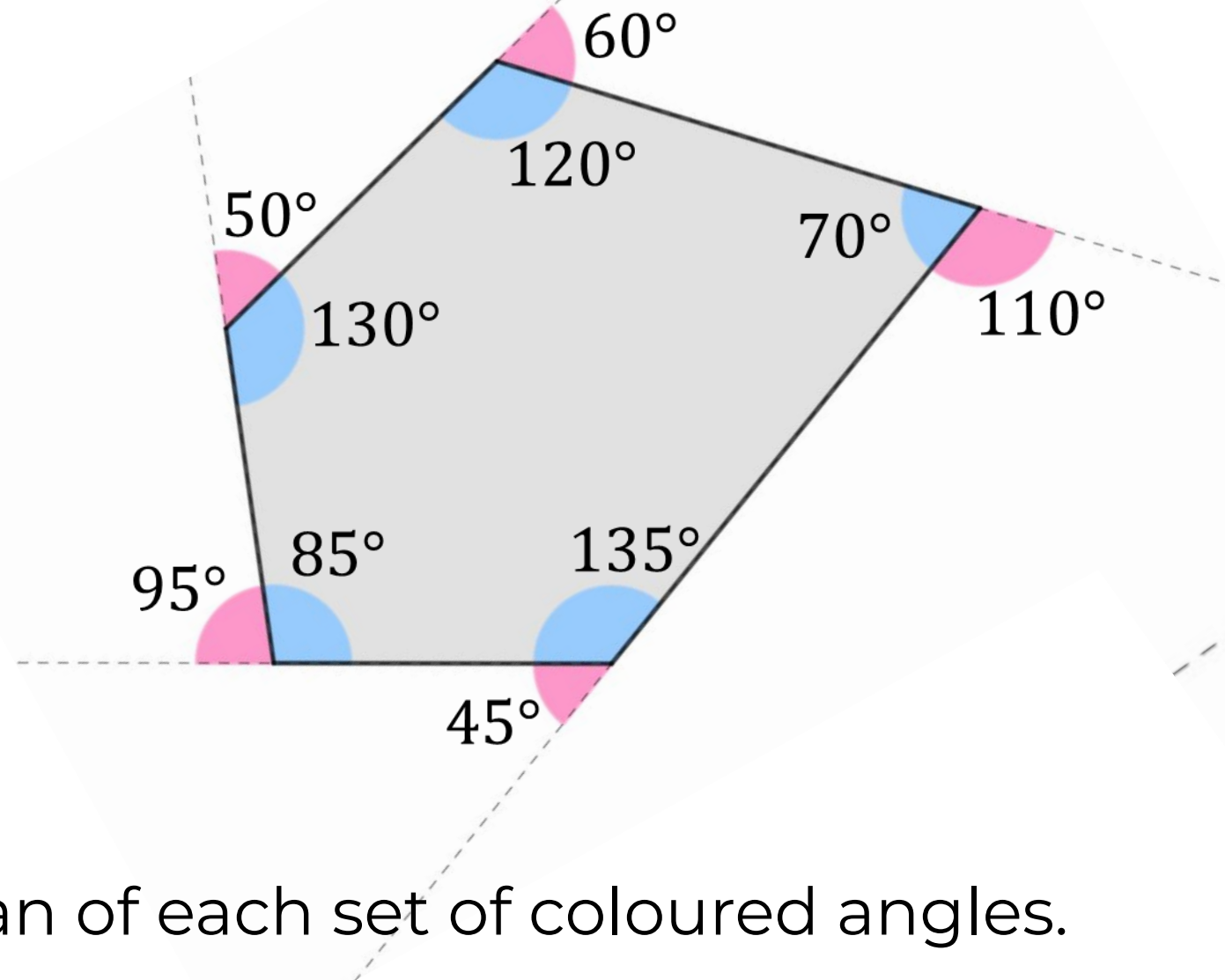


Angles in Polygons. Downloadable Resource – Regular interior/exterior angles (and mean of irregular).



Try this



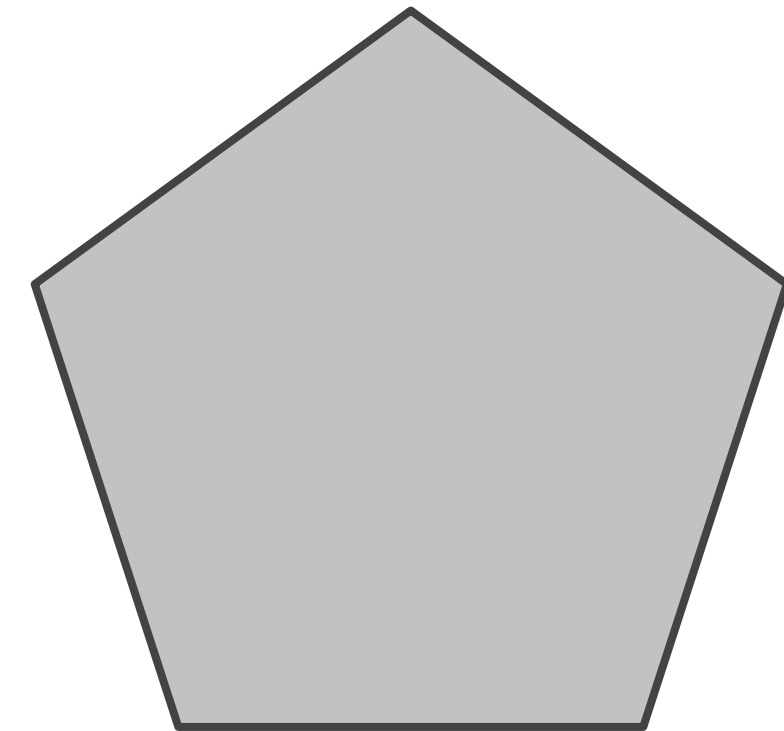
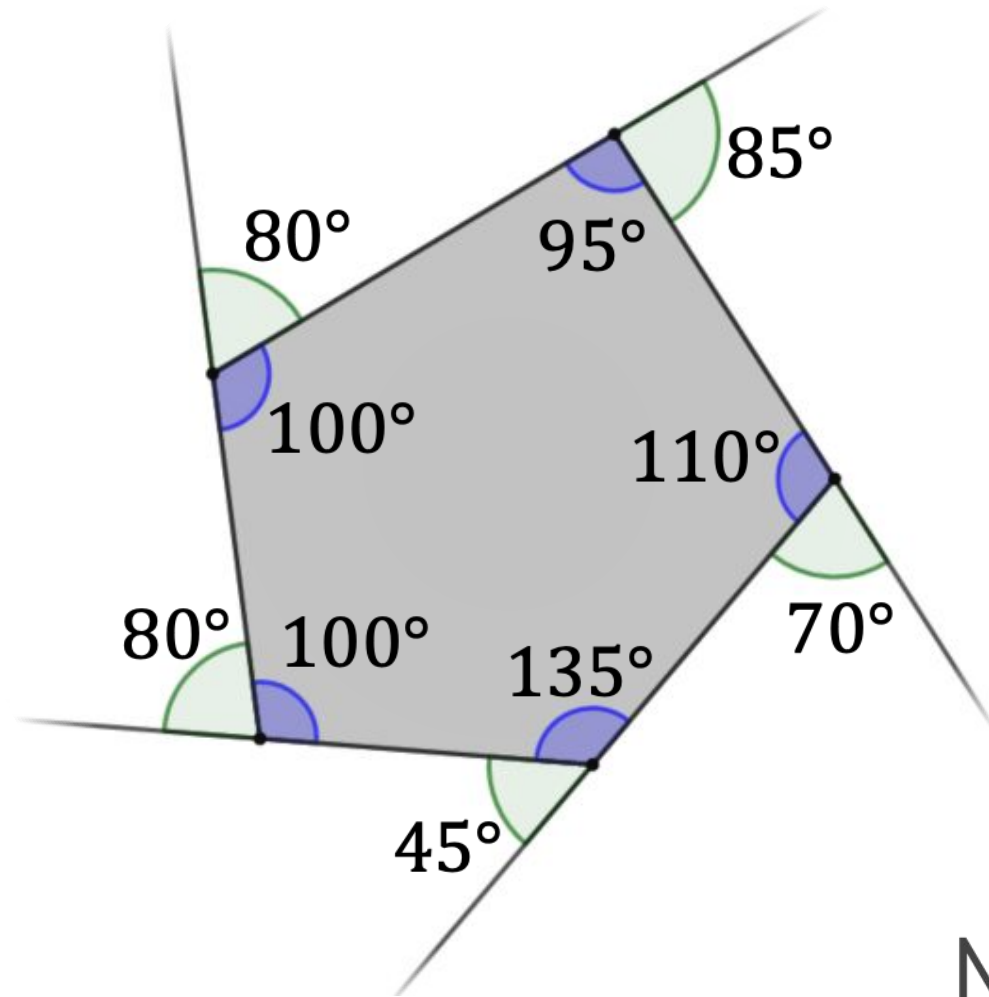
Find the mean of each set of coloured angles.

How could you describe each set of angles?

What do you notice? And would it apply to other polygons?



Connect



Mean interior angle in an n-sided polygon = $\frac{180 (n-2)}{n}$

Mean exterior angle in an n-sided polygon = $\frac{360}{n}$

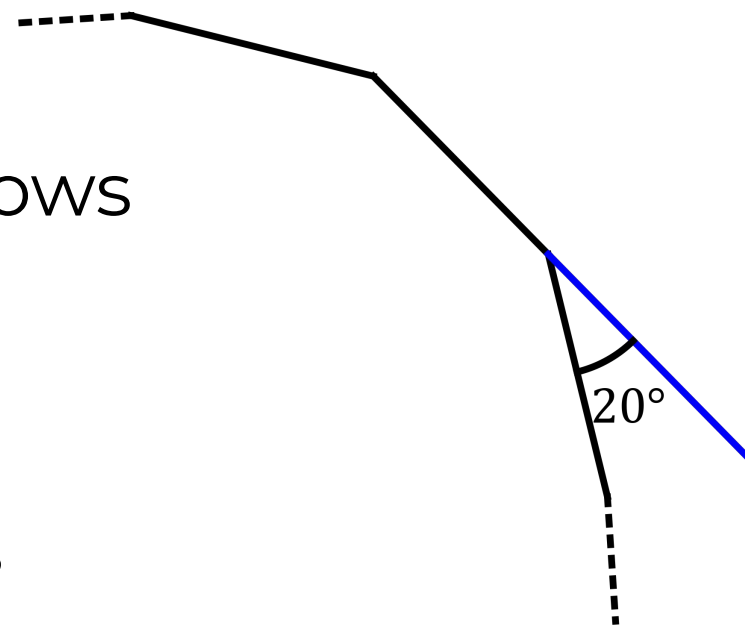


Independent Task

Find the exterior **and** interior angle of a regular octagon.

Find the exterior **and** interior angle of a regular decagon.

This diagram shows part of a regular polygon.



How many sides does this polygon have?

The sum of the interior angles of a polygon is 1980° .

How many sides does this polygon have?

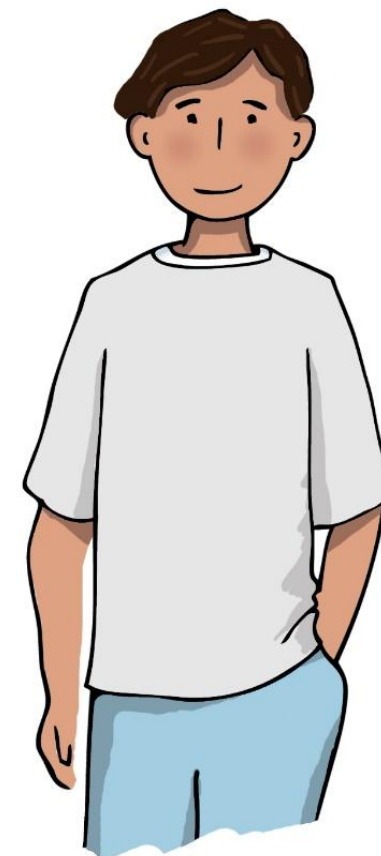


Explore

- 1 Find the regular polygon which has an interior angle of 156°
- 2 Cala and Antoni are each thinking of a regular polygon. How many sides do their polygons have?



My regular polygon has an exterior angle of 15° .



My regular polygon has an exterior angle of 1° .

