Practice Task 3

What is the size of the angle ABC?

Clues:

In Geometry module 1 you saw that
\[ s = (n - 2)180^\circ \]
where:
- \( s \) = the sum of the interior angles.
- \( n \) = the number of sides of the polygon

The two pentagons are regular polygons (see Geometry module 1) with all sides of the same length. If all sides are the same length, then all angles are the same.

To find the angles in a pentagon (five-sided polygon):

\[
(5 - 2) \times 180 \\
3 \times 180 = 540^\circ
\]

All angles are the same size in a regular pentagon so each angle is \( 540 \div 5 = 60^\circ \)

Therefore angles ABF = 60° and FBC = 60°

Angle ABC = 360 (full revolution) – (2 x 60)

\[ 360 - 120 = 240^\circ \]