

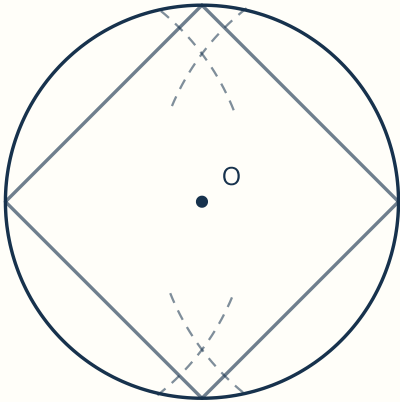
Compass constructions — Inscribe a regular polygon

Name: _____

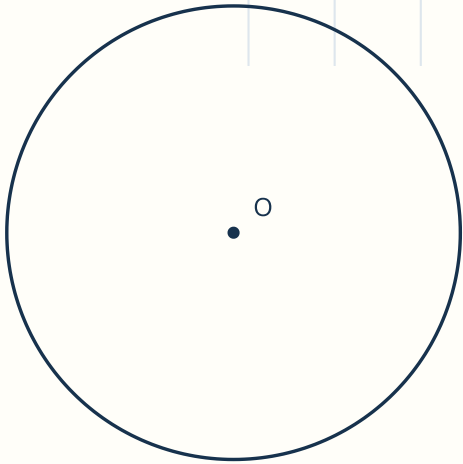
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Inscribe each shape in its circle. Leave your arcs showing.

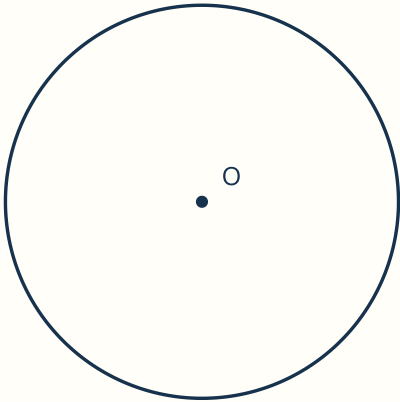
1 Inscribe a square.



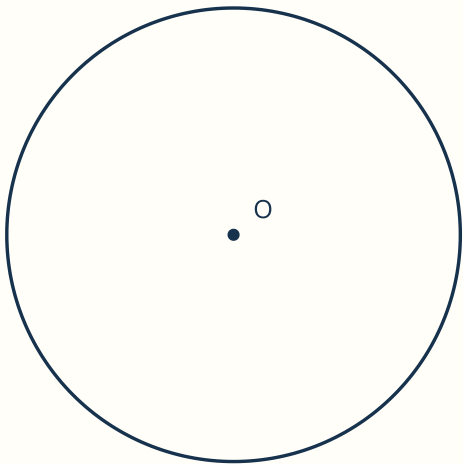
2 Inscribe a square.



3 Inscribe an equilateral triangle.



4 Inscribe a regular hexagon.



Compass constructions · Inscribe a regular polygon — Answer key

1. Inscribe a square.
(square, radius 26mm) — 1. Draw a diameter through the centre O. 2. Construct the perpendicular bisector of that diameter — it is a second diameter. 3. The two diameters meet the circle at four points. 4. Join the four points in order.

2. Inscribe a square.
(square, radius 30mm) — 1. Draw a diameter through the centre O. 2. Construct the perpendicular bisector of that diameter — it is a second diameter. 3. The two diameters meet the circle at four points. 4. Join the four points in order.

3. Inscribe an equilateral triangle. (triangle, radius 26mm) — 1. Keep the compass set to the circle's radius. 2. Step it round the circle to make six marks, as for a hexagon. 3. Join every OTHER mark. 4. Three of the six marks are the corners of an equilateral triangle.

4. Inscribe a regular hexagon. (hexagon, radius 30mm) — 1. Keep the compass set to the circle's radius for the whole construction. 2. Put the point anywhere on the circle and mark an arc across it. 3. Move the point to that mark and repeat, all the way round — you get six marks. 4. Join the six marks in order.

