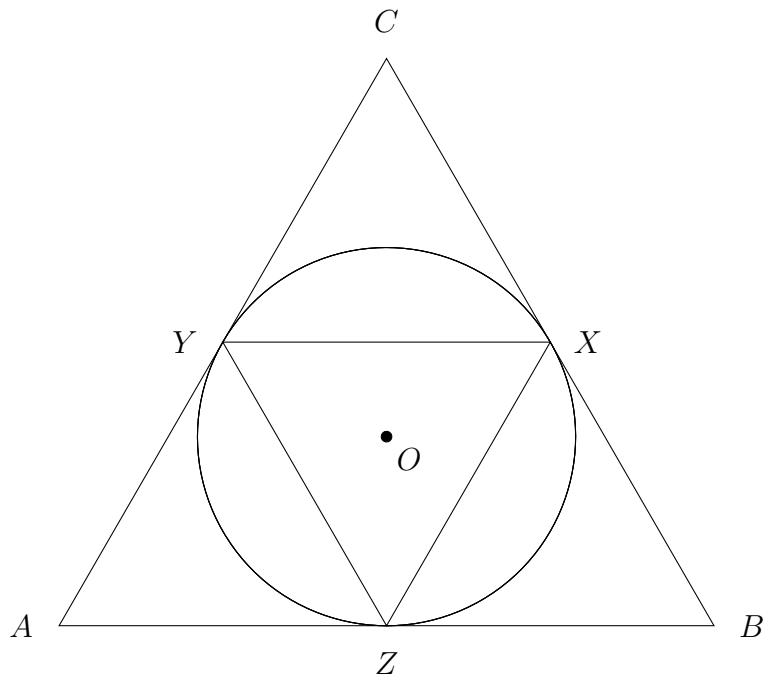1. Here is a diagram of a circle centre O and triangles ABC and XYZ

(i) Complete:

Straight lines that meet the circumference of the circle
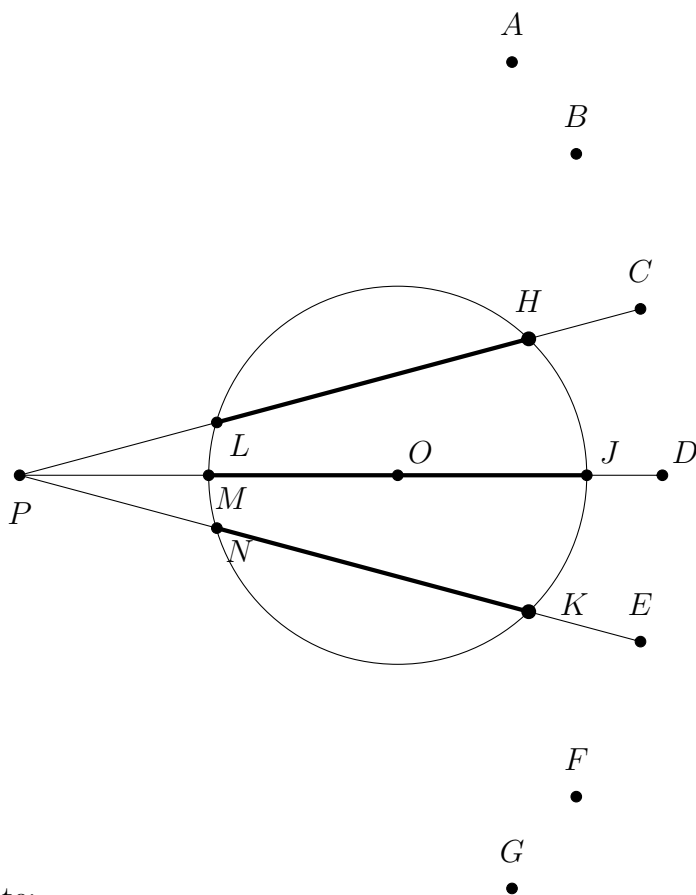
- • 1 time are tangents e.g. .... and .... and ....

- • 2 times are chords e.g. .... and .... and ....

(ii) Draw 3 diameters one through X, one through Y and one through Z

2. Here is a diagram of points a circle centre O and some points.

   The lines drawn from the point P to the points C, D and E are called PC, PD and PE

   (i) Use a ruler to draw straight lines PA, PB, PF and PG.
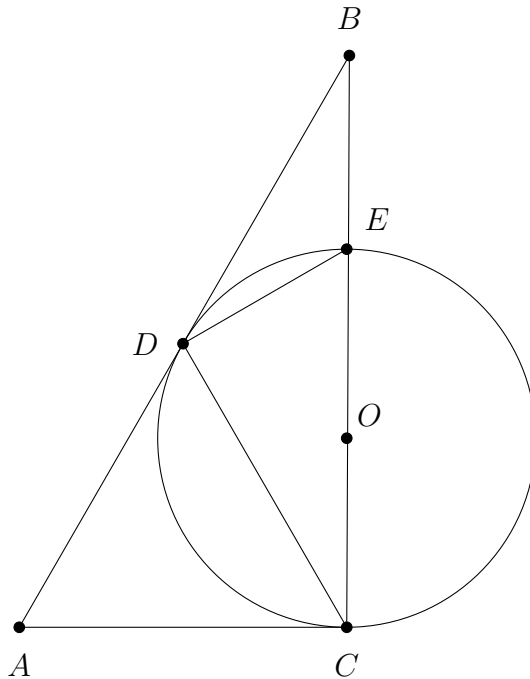

   (ii) Complete:

   Straight lines from the point P that meet the circumference of the circle:

   - 0 times e.g. P... and P... have no special name,

   - 1 time e.g. P... and P... have the name tangent,

   - 2 times e.g. PC, PD and PE don't have a special name, **except** for the line segment (part of the line) inside the circle.

   The line segments inside the circle e.g. ...., ..., and .... have the name chord.

   The chord .... which goes through the centre of the circle has the name diameter.

3. Here is a diagram of two right angled triangles ABC and CDE and a circle centre O.

Complete:

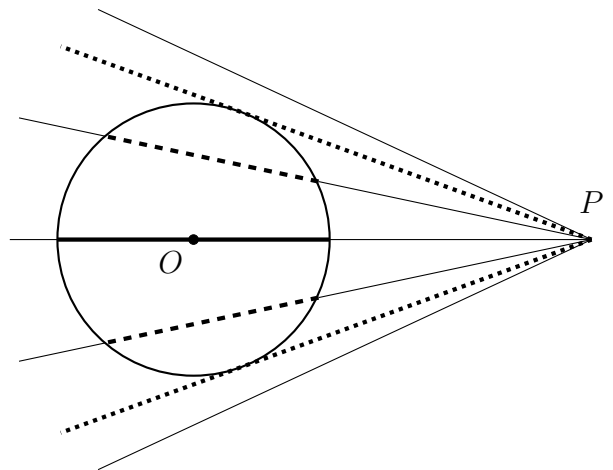Straight lines that meet the circumference once are tangents e.g. .... and ....

Straight lines between two points on the circumference are chords e.g. ...., ... and ....

The chord .... is a diameter because it goes through the centre of the circle, O

4. Here is a diagram of a circle centre O and 7 lines from point P

(i) Use **chord**, **diameter** and **tangent** to complete this key

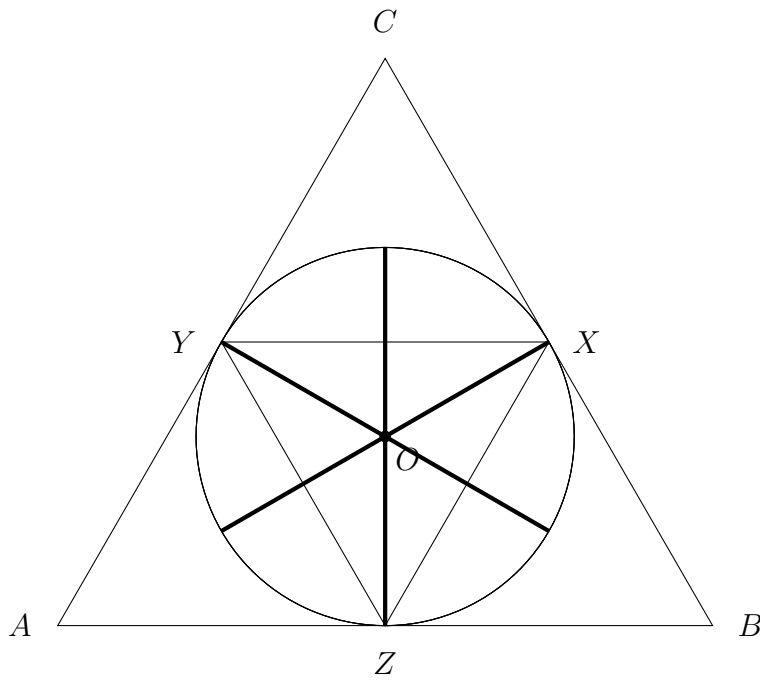|	
··········	_____
- - - - -	_____
▬▬▬	_____
———	Other lines and line segments

(ii) Use **chord**, **diameter** and **tangent** to complete this table

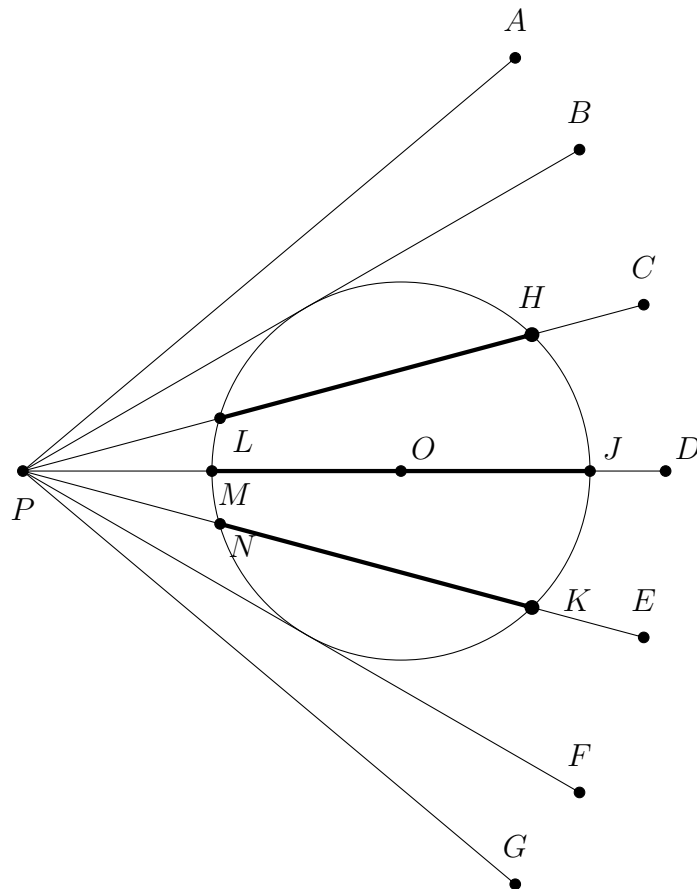| Name	Description
	A line segment (part of a line) which meets the circumference 2 times
	A line which meets the circumference 1 time
	A chord that goes through the centre of the circle

Answers

1. (i) tangent: A(Z)B and B(X)C and C(Y)A; chords: XY, YZ and ZX
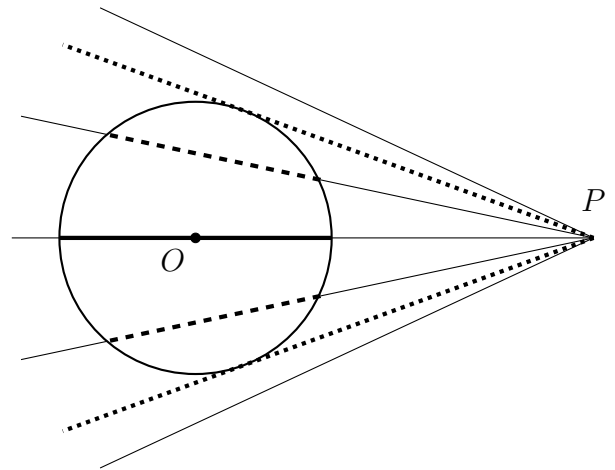

   (ii)

2. (i)

   (ii) 0 times: A, G;
   1 time: B, F;
   chords: HL, JM, KN,
   diameter: JM

3. tangents: A(E)B and AC
   chords: C(O)D, DE and EC
   diameter: C(O)D

4. (i)

·········· Tangent	_____
- - - - - Chord	_____
───── Diameter	_____
───── Other lines and line segments	

(ii)

Name	Description
Chord	A line segment (part of a line) which meets the circumference 2 times
Tangent	A line which meets the circumference 1 time
Diameter	A chord that goes through the centre of the circle