Thus, MOB is an equilateral triangle (having 2 equal sides and a 60° angle)

3) a) (KO) is perpendicular to [AB] at O (given) (C) is a circle of center O and diameter [AB] (given)

So, O is the midpt of [AB].

Thus, (KO) is the perpendicular bisector of [AB]

- In Δ KAB we have

(KO) is the perp. bisector of [AB] (proved)

So, K is equidistant from A & B

then KA = KB

Thus, KAB is isosceles at K having 2 equal sides.

b) In Δ BAE:

. K is the midpoint of [BE] (given- E is equidistant from B with respect to K)

. O is the midpoint of [AB] (proved)

Thus, (KO) is parallel to (EA) (midpoint theorem in any Δ)

(KO) is parallel to (EA) (proved)
and (KO) is perpendicular to (AB) at O (given)
then (EA) is perpendicular to (AB) at A
(2 parallel straight lines, one perpendicular to a line, then the other is also perpendicular to the same line)
then $E\hat{A}B = 90°$ (definition of perpendicular)
Thus, (EA) is tangent to (C) at A (angle formed between line and radius is 90° -proved-)