KŘEPINSKÁ, HOUSKOVÁ, BUBENÍKOVÁ – ROZŠIŘUJÍCÍ MATERIÁLY, MATFYZPRESS 2006

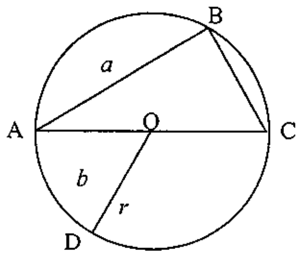
f) $C = \pi d$
g) $(a \pm b)^2 = a^2 \pm 2\,ab + b^2$
h) $\dfrac{a^2 + 2ab + b^2}{a + b} = a + b$
i) $3ab - \dfrac{b}{c} = 11$
j) $\dfrac{p}{q} + r = q^2$
k) $V = \pi r^2 h$
l) $3(2p - x) < px + 1$

7. ***Read out the following:***

a) $a - c = m - y$
b) $4\,a^2b + 8\,ab^2 = 3c$
c) $1 + 2x = y^3 + q^3 = 1$
d) $(a + c)\,d = ca$
e) $mh^2 = 3$

FOCUS B

A CIRCLE



A circle is a plane figure. The distance around a circle is called a *circumference*. A half circle is called a *semi-circle*. All points on the circumference of a circle are *equidistant* from the centre. A line which is drawn from the point of origin to its circumference is called a *radius* (pl. *radii*). All the radii of a circle are equal. A line passing through the centre of a circle is called a *diameter*. A part of a circumference of a circle is called an *arc*. The straight line joining the ends of an arc is called a *chord*. A part of a circle enclosed by two radii and an arc is called a *sector* and a part enclosed by an arc and a chord is called a *segment*.

1. ***Name the following:***

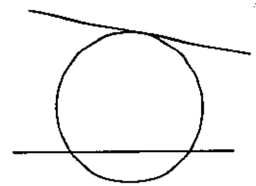
a) area *a*
b) area *b*
c) AC
d) AO
e) O
f) AB and BC

2. ***Say, whether the following statements are true or false. Correct the false statements:***

a) A chord is a curved line.
b) The radius of a circle is half the length of its diameter.
c) A closed curve where all points on the curve are equidistant from the centre is called a circumference.
d) A sector has three sides, two chords and an arc.

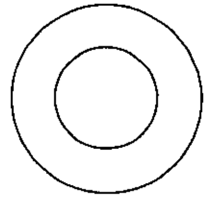
3. ***Look and read:***

a)



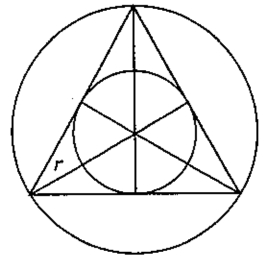
A line meeting the circumference but which does not intersect it is called a *tangent*. A line which intersects the circumference in two places is called a *secant*.

b)



These circles have the same point of origin. They are *concentric*. An *annulus* (pl. *annuli*) is the region between two concentric circles.

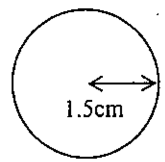
c)



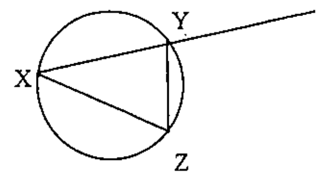
A circle which passes through the vertices of a triangle is called the *circumcircle* of the triangle, and its centre is called its *circumcentre*. The circle is *circumscribed* about (around) the triangle. A circle may be also *inscribed* in the triangle, then each side of the triangle is a tangent to the circle. The centre of an inscribed triangle is called its *incentre*.

4. ***Give information about the figures:***

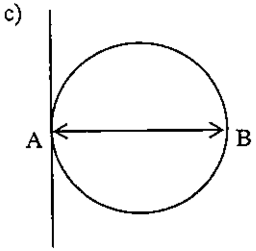
a)



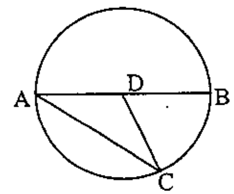
b)



c)



d)



5. *A circle has a radius 3 cm. Calculate:*
   a) the diameter
   b) the circumference

6. *The circumference of a circle is approximately 15.7 cm. Calculate:*
   a) the approximate radius
   b) the approximate diameter

7. *Fill in the missing expressions:*
   a) If we draw the ..... of a circle, the line divides the circle into two equal .....
   b) A semi-circle ..... an angle of 90° at the .....
   c) A triangle has been ..... if a circle passes through its .....
   d) A ..... is the area enclosed by an arc and two ....., while a ..... is the area enclosed by an arc and a .....

How to draw Inscribed and Circumscribed Circles

http://www.youtube.com/watch?v=gpLpAmqu_s4&feature=related

Fill in the missing words.

a) Circumscribed circle is any circle that lies .....

b) Inscribed circle is any circle that lies .....

Answer the Qs.

a) Where is the center of the circumscribed circle?

.....

b)How can you construct perpendicular bisectors?

.....

c) What does „co-linear" mean?

.....

d) What happens to the perpendicular bisectors when the vertices are co-linear?

.....

Watch the second part of a video and describe how to construct inscribed circle.