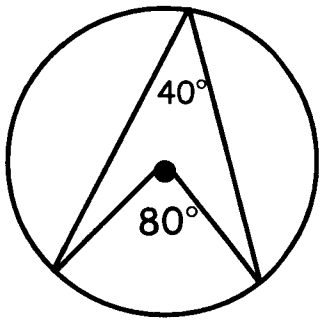
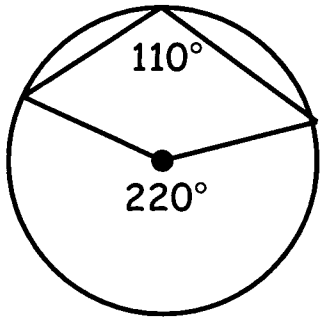
ANGLE PROPERTIES of CIRCLES

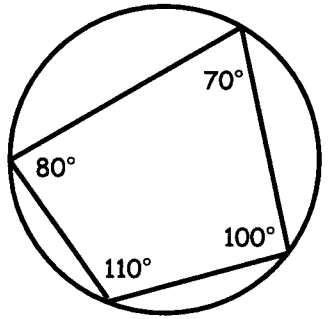
Page	Description
1	Notes on the main ideas and theories
2	Examples of angle theories inside a circle
3	Further practise of angle theories inside a circle
4	ngle theories using a tangent to a circle
5	Mixed examples, questions 1 to 5
6	Mixed examples, questions 5 to 10

Angle at the centre is twice the angle at the circumference

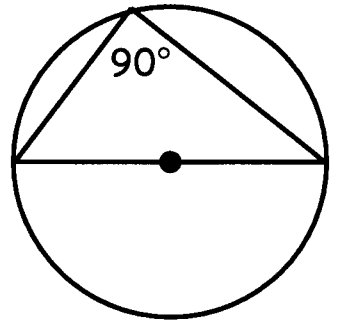




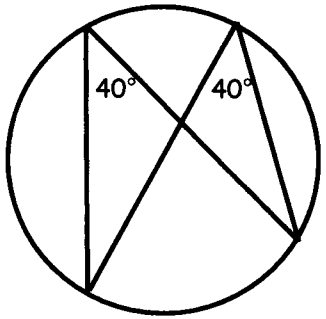
Opposite angles of a cyclic quadrilateral add to 180



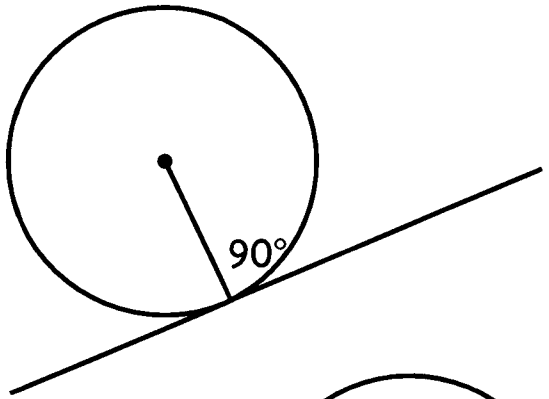
The angle in a semicircle is a right angle



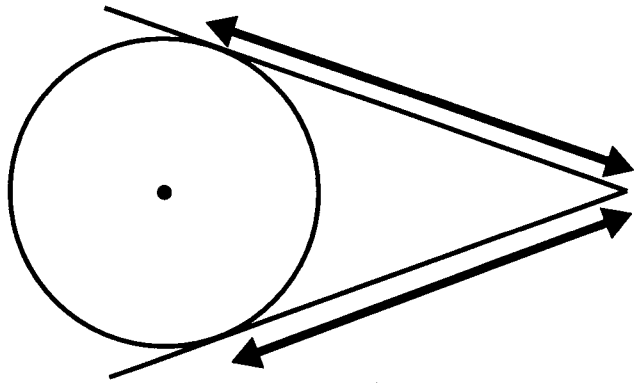
Angles drawn in the same segment are equal



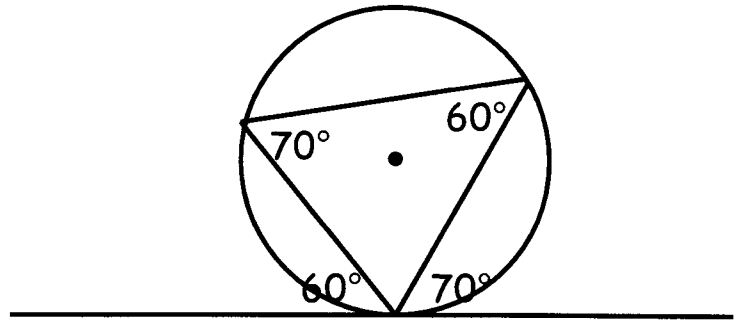
The tangent at any point on a circle is perpendicular to the radius at that point

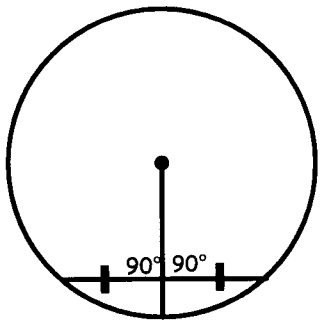


Tangents from an external point are equal in length

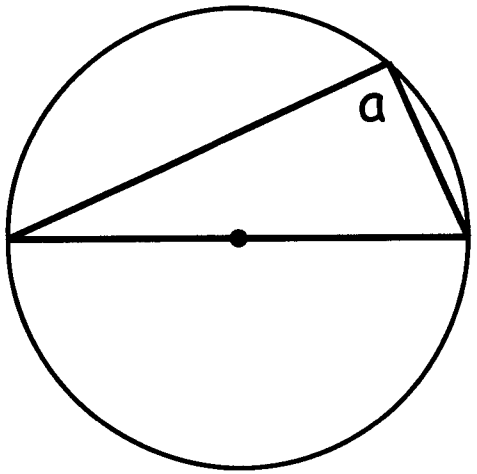


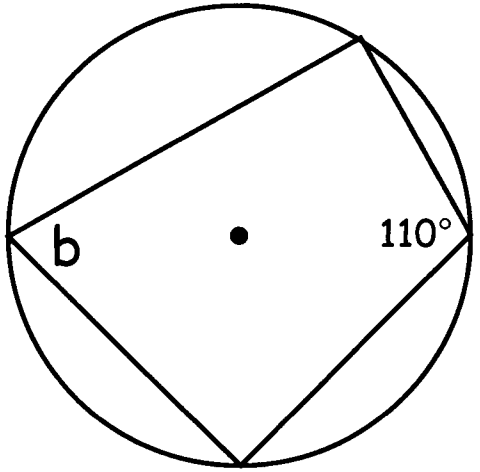
The alternate segment theorem. The angle between tangent and chord is equal to the angle in the alternate (other) segment

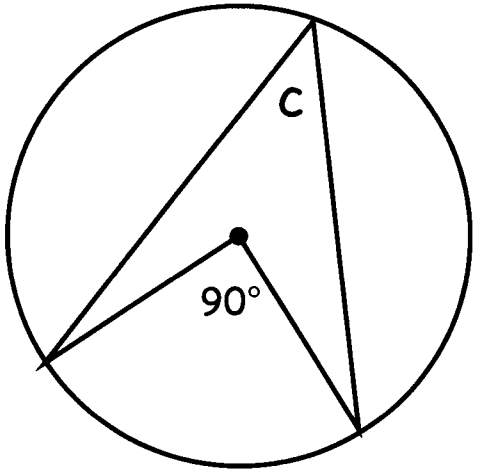


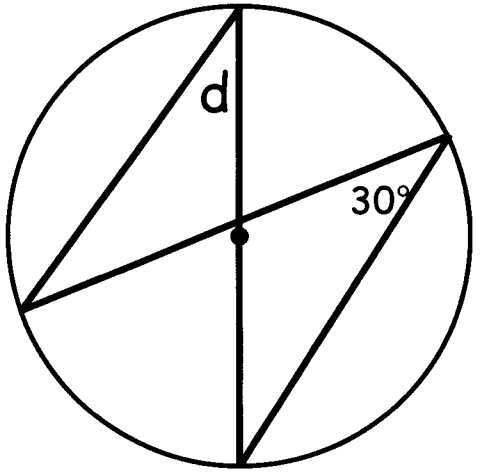


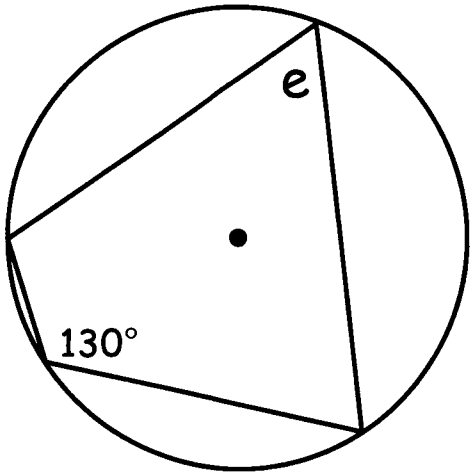
The perpendicular from the centre of a circle to a chord bisects the chord

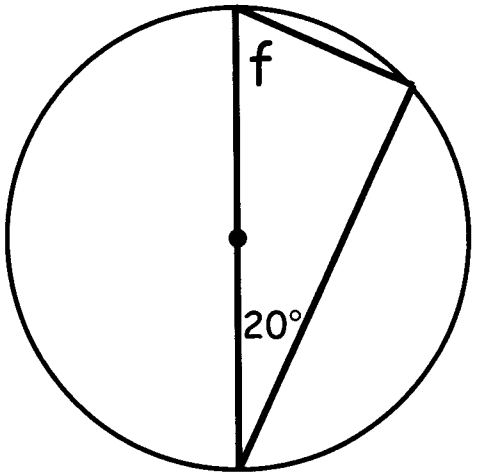

a

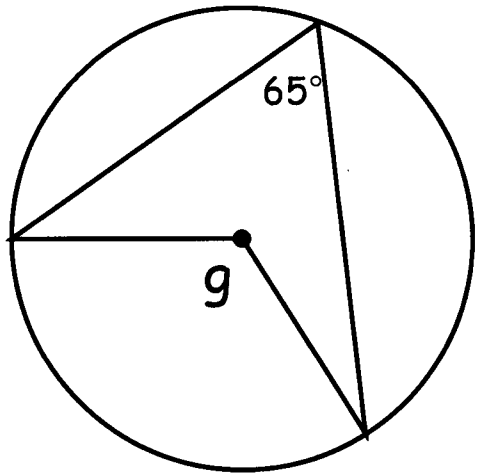

b
110°

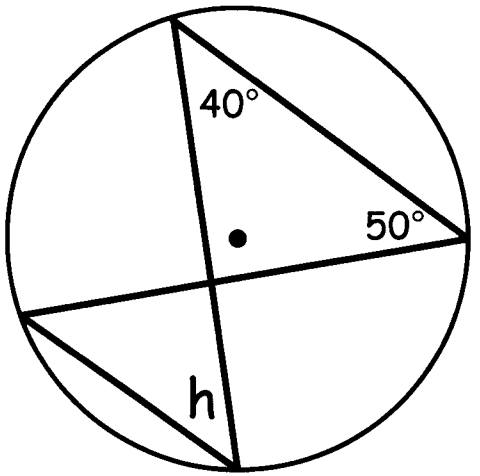

c
90°

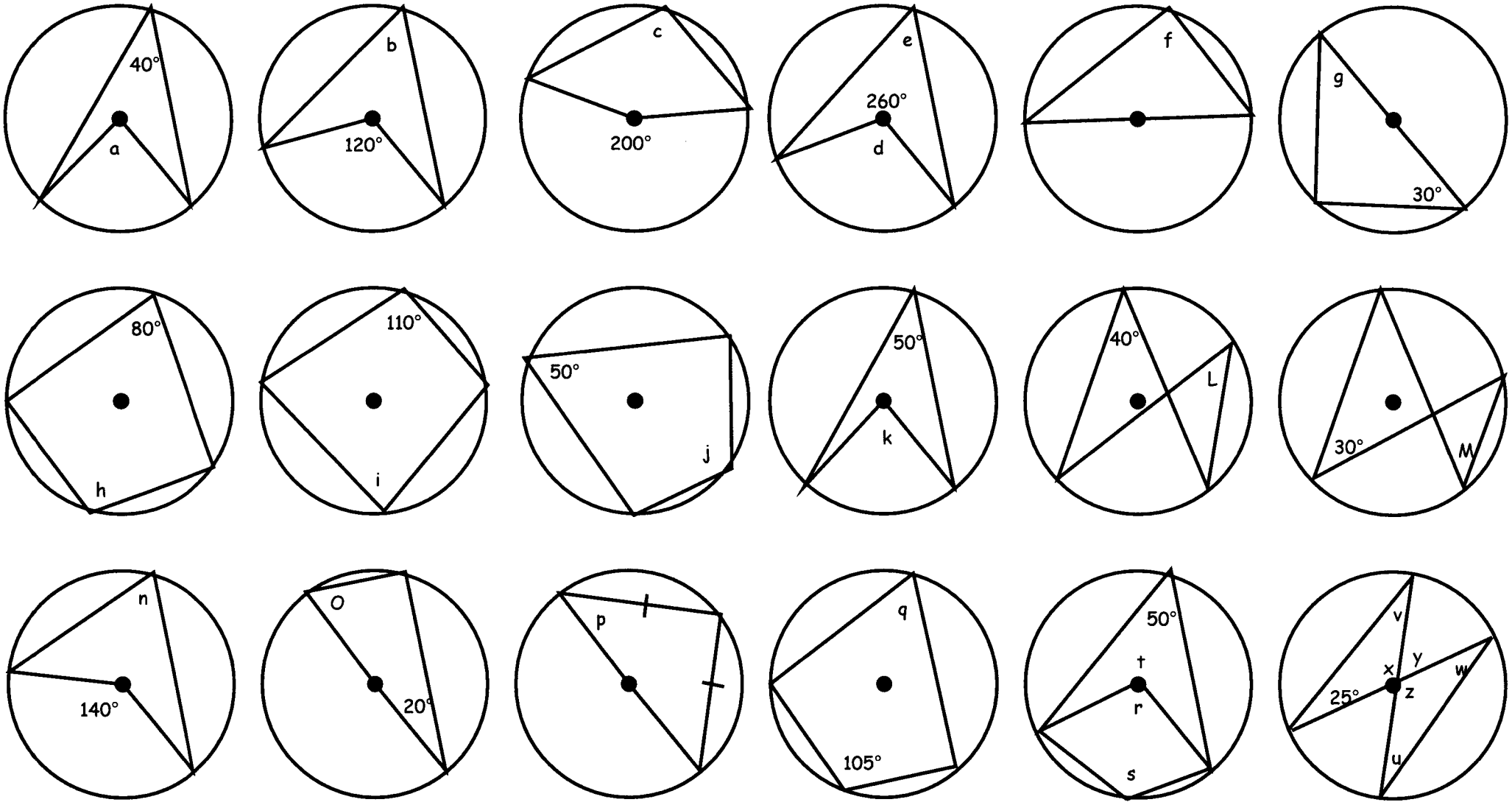

d
30°

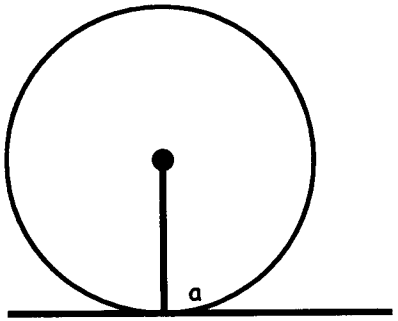

e
130°

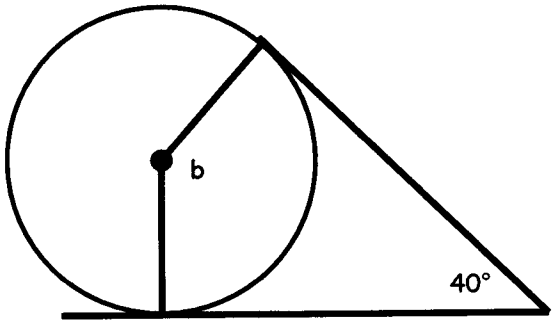

f
20°

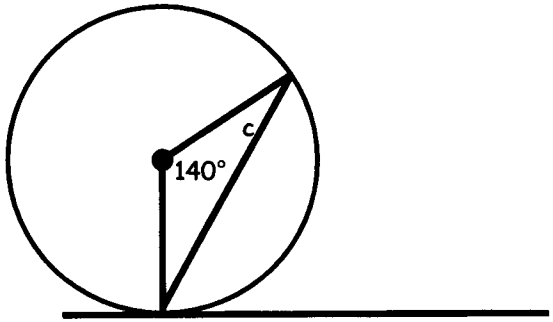

65°
g

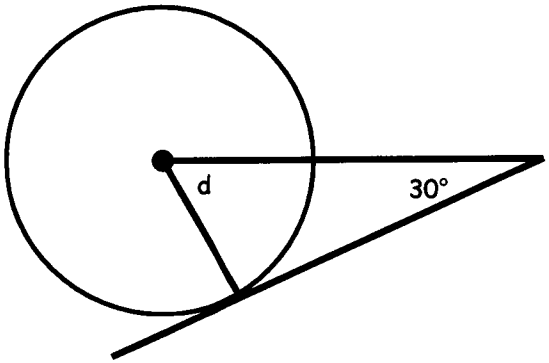

40°
50°
h

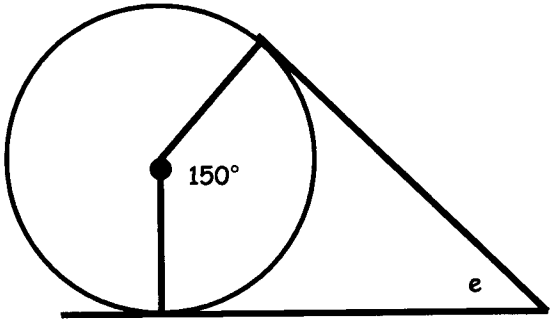

40°
a
b
120°
c
200°
e
260°
d
f
g
30°
80°
h
110°
i
50°
j
50°
k
40°
L
30°
M
n
140°
O
20°
p
q
105°
50°
t
r
s
v
y
x
w
25°
z
u

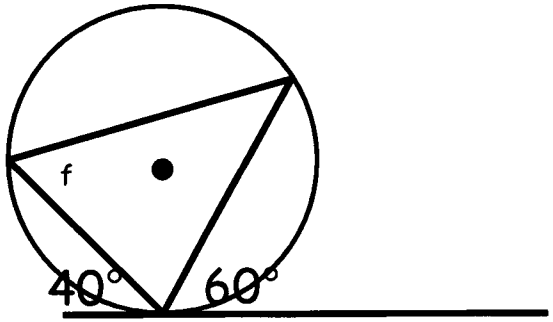

a

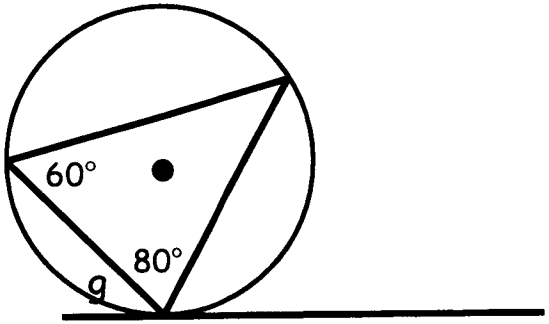

b
40°

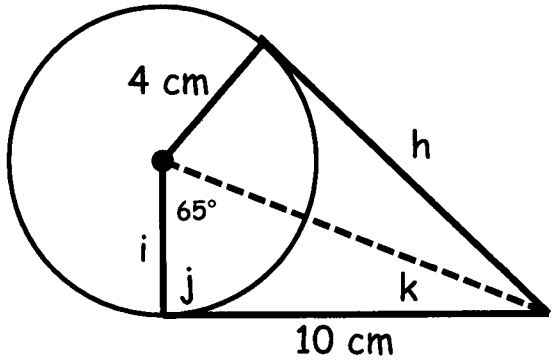

c
140°

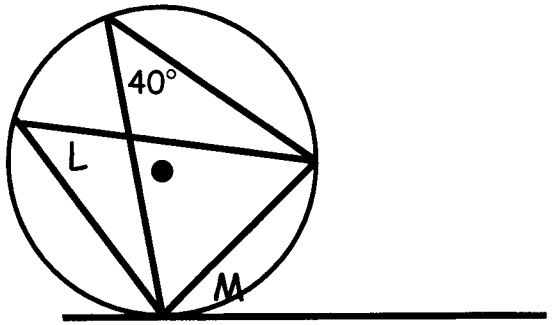

d
30°


150°
e


f
40°
60°

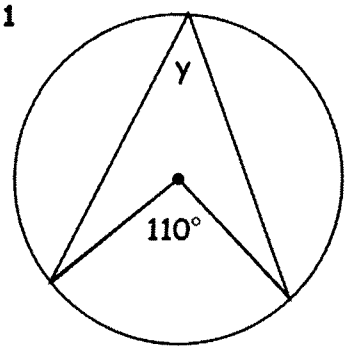

60°
80°
g


4 cm
h
65°
i
j
k
10 cm

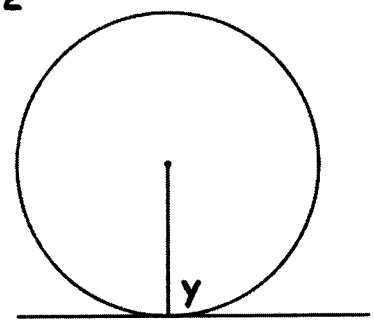

40°
L
M

Circle Theorems

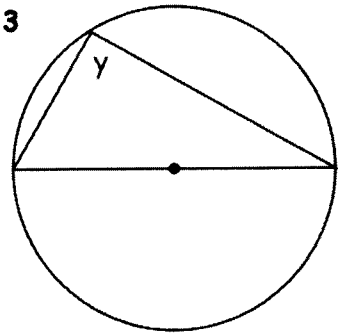
1



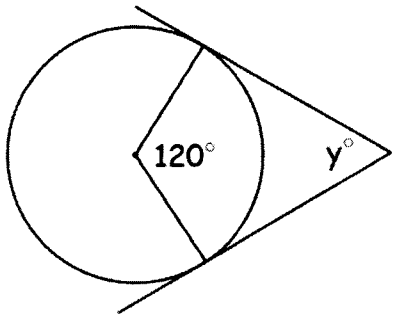
2



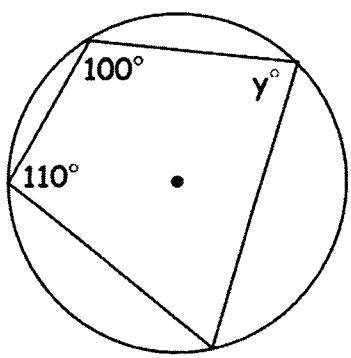
3



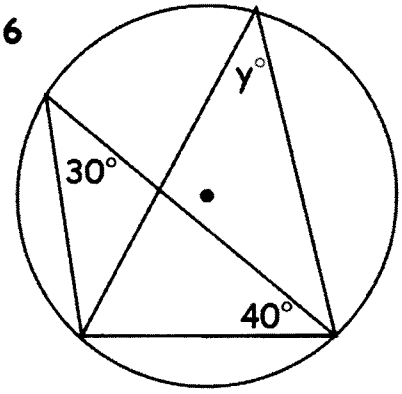
4



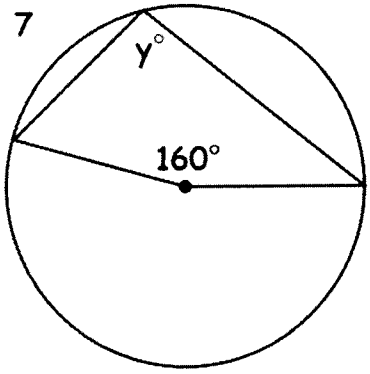
5



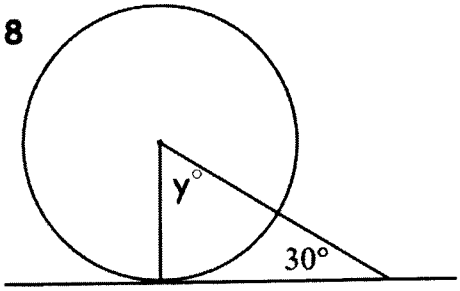
6



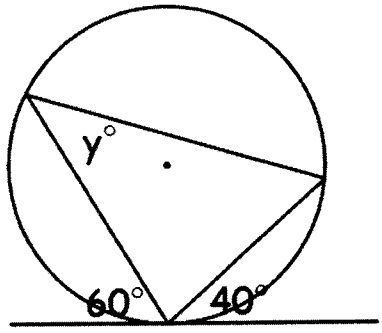
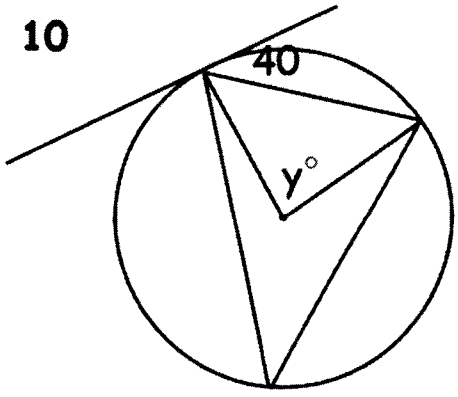
7



8



9



10