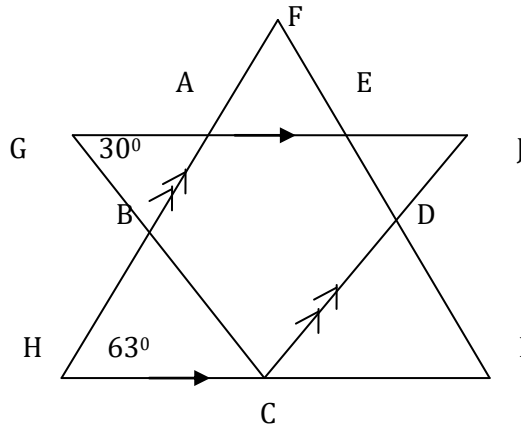


ANGLES AND PLANE FIGURES

KCSE 1989 – 2012 Form 1 Mathematics

1. **1989 Q8 P2**

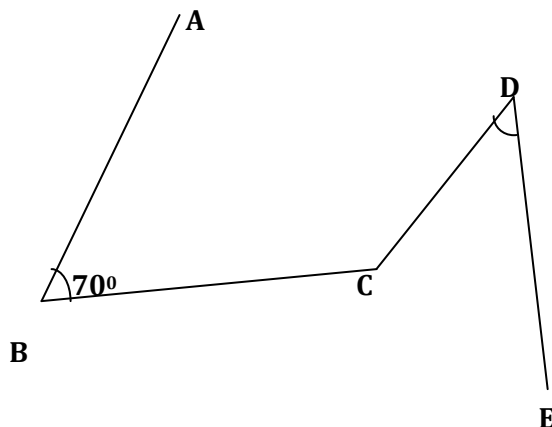
In the figure below, GJ is parallel to HI and FH is parallel to CJ. Angle AGB = 30° , and angle AHC = 63° . Find angle GCJ (2marks)



2. **1991 Q10 P2**

In the figure below $AB \parallel DE$, $\angle ABC = 70^\circ$ and $\angle CDE = 23^\circ$. Find $\angle BCD$

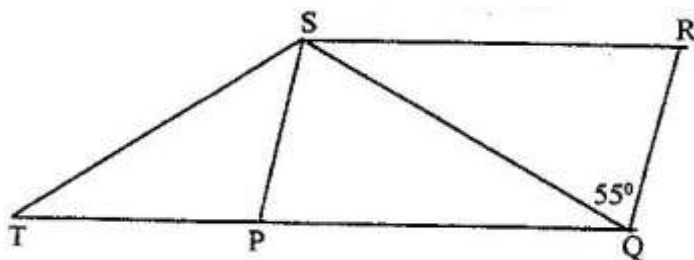
(3marks)



23°

3. **1997 Q3 P1**

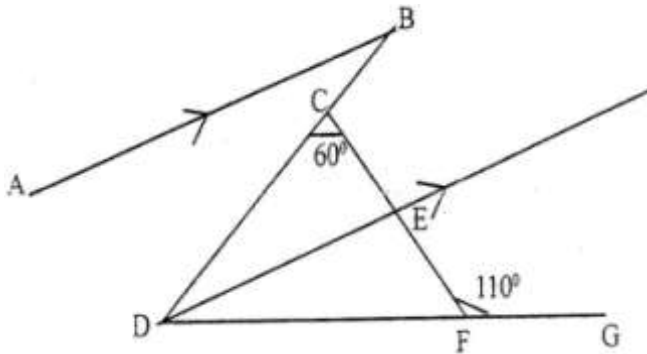
In the figure below PQRS is a rhombus, $\angle SQR = 55^\circ$, $\angle QST$ is a right angle and TPQ is a straight line



Find the size of the angle STQ

4. **1998 Q 4 P1**

In the figure below, AB is parallel to DE, DE bisects angle BDG, angle DCF = 60° and angle CFG = 110°



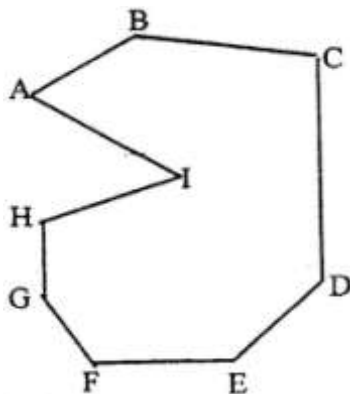
Find

- (a) $\angle CDF$
- (b) $\angle ABD$

Give reasons for your answers

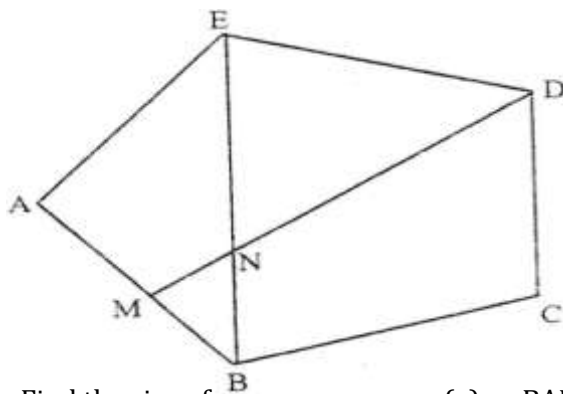
5. **1999 Q 3 P1**

Find by calculation the sum of all the interior angles in the figure ABCDEFGHI below



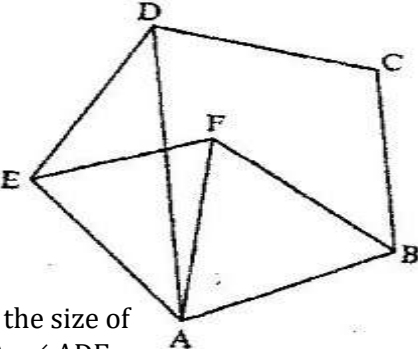
6. **2000 Q 3 P1**

In the figure below ABCD is a rectangular pentagon and M is the midpoint of AB. DM intersects EB at N.



Find the size of:

- (a) $\angle BAE$
- (b) $\angle BED$
- (c) $\angle BNM$

7.	<p>2001 Q 14 P1</p> <p>The interior angles of the hexagon are $2x^\circ$, $\frac{1}{2}x^\circ + 40^\circ$, 110°, 130° and 160°. Find the value of the smallest angle</p>						
8.	<p>2004 Q 2 P1</p> <p>The size of an interior angle of a regular polygon is 156°. Find the number of sides of the polygon.</p>						
9.	<p>2005 Q 5 P1</p> <p>The size of each interior angle of a regular polygon is five times the size of the exterior angle. Find the number of sides of the polygon. (3 marks)</p>						
10.	<p>2006 Q 4 P1</p> <p>In the figure below, ABCDE is a regular pentagon and ABF is an equilateral triangle (1 mark)</p> <div style="text-align: center;">  </div> <p>Find the size of</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">a) $\angle ADE$</td> <td style="width: 50%; text-align: right;">(1 mark)</td> </tr> <tr> <td>b) $\angle AEF$</td> <td style="text-align: right;">(1 mark)</td> </tr> <tr> <td>c) $\angle DAF$</td> <td style="text-align: right;">(1 mark)</td> </tr> </table>	a) $\angle ADE$	(1 mark)	b) $\angle AEF$	(1 mark)	c) $\angle DAF$	(1 mark)
a) $\angle ADE$	(1 mark)						
b) $\angle AEF$	(1 mark)						
c) $\angle DAF$	(1 mark)						
11.	<p>2007 Q 2 P1</p> <p>The size of an interior angle of a regular polygon is $3x^\circ$ while its exterior angle is $(x - 20)^\circ$. Find the number of sides of the polygon (3 marks)</p>						
12.	<p>2009 Q 10 P1</p> <p>The size of an interior angle of a regular polygon is $6\frac{1}{2}$ times that of its exterior angle. Determine the number of sides of the polygon (3 marks)</p>						

