

**International Indian School-Riyadh**  
Formative Assessment (June 2012)

Std:IX  
Sub: Mathematics

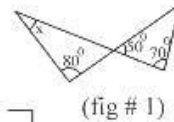
*W. Sheet*

**Section A :** Choose the correct answer from the given options. (1X 5=5)

- 1) Which of the followings has non-terminating non-recurring decimal expansion?

A.  $\frac{1}{\sqrt{2}}$     B.  $\frac{13}{7}$     C.  $\frac{15}{16}$     D.  $\sqrt{6.25}$

- 2) In fig. #1 the value of x is ... [A.  $70^\circ$     B.  $80^\circ$     C.  $50^\circ$     D.  $60^\circ$ ]



- 3) If  $x + \frac{1}{x} = \sqrt{6}$  then  $x^2 + \frac{1}{x^2}$  is ... [A. 6    B. 4    C. 34    D. 8]

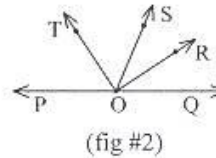
- 4)  $\frac{p}{q}$  Form of  $0.2\overline{15}$  is ... [A.  $\frac{15}{990}$     B.  $\frac{215}{990}$     C.  $\frac{215}{900}$     D.  $\frac{213}{990}$ ]

- 5) l, m & n are three lines in a plane such that  $l \perp m$  and  $n \perp m$ . Then l & n are

[A. Perpendicular lines    B. Parallel lines    C. Intersecting lines    D. None of these]

**Section B** (2X3=6)

- 6) In fig. #2, OS stands on a line POQ. If OR and OT are bisectors of  $\angle QOS$  and  $\angle POS$  respectively, find the measure of  $\angle ROT$

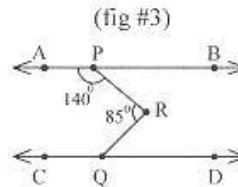


- 7) Show that  $\left(\frac{a}{b}\right)^{a+b} \times \left(\frac{b}{c}\right)^{b+c} \times \left(\frac{c}{a}\right)^{c+a} = 1$

- 8) Find x if  $\sqrt{x} = \frac{\sqrt{5+2} + \sqrt{5-2}}{\sqrt{5+1}}$

**Section C** (3 X 2 = 6)

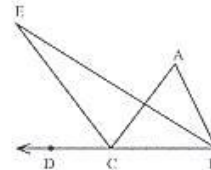
- 9) In fig. #3,  $AB \parallel CD$ . If  $\angle APR = 140^\circ$  and  $\angle PRQ = 85^\circ$  Find  $\angle RQD$



- 10) Write two rational numbers and two irrational numbers in between  $\frac{3}{5}$  and  $\frac{5}{6}$

**Section D** (4 x2 = 8)

- 11) The side BC of  $\triangle ABC$  is produced to a point D. If the bisectors of  $\angle ABC$  and  $\angle ACD$  meet at a point E, then prove that  $\angle BAC = 2 \angle BEC$  (fig #4)



- 12) If  $x = \frac{2+\sqrt{3}}{2-\sqrt{3}}$  and  $y = \frac{2-\sqrt{3}}{2+\sqrt{3}}$  find the value of  $x^2 - xy + y^2$

OR

If  $\frac{\sqrt{6}}{\sqrt{3}-\sqrt{2}} - \frac{4\sqrt{3}}{\sqrt{6}+\sqrt{2}} + \frac{3\sqrt{2}}{\sqrt{6}+\sqrt{3}} = a\sqrt{3}$  find the value of a.