International Indian School-Riyadh

Formative Assessment-2 (June 2012)

Std:IX
Sub: Mathematics

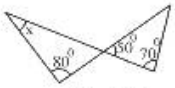
W. Sheet

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. 70^0 B. 80^0 C. 50^0 D. 60^0]



(fig # 1)

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

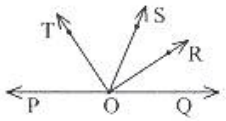
4) $\frac{p}{q}$ Form of $0.2\overline{15}$ is ... [A. $\frac{15}{990}$ B. $\frac{215}{990}$ C. $\frac{215}{900}$ D. $\frac{213}{990}$]

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 , $\overrightarrow{OS}$ stands on a line POQ. If $\overrightarrow{OR}$ and $\overrightarrow{OT}$ are bisectors of $\angle QOS$ and $\angle POS$ respectievly, find the measure of $\angle ROT$

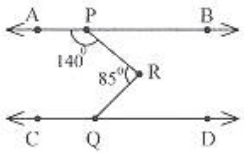


(fig #2)

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

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

(fig #3)



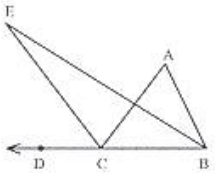
Section C (3 X 2 = 6)

9) In fig. # 3, AB ∥ CD . If $\angle APR = 140^0$ and $\angle PRQ = 85^0$ 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)



(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 .