Istituto
di Istruzione
Superiore "*Decio Celeri*"
Lovere (BG)

Liceo Classico – Scientifico – Artistico

B

VERIFICA DI MATEMATICA

CLASSE 2^B – 2 Febbraio 2007

COGNOME _____ NOME _____

Verifica le seguenti identità:

1. $\left(\sqrt{31-8\sqrt{15}}\right)\cdot\dfrac{\sqrt{8+2\sqrt{15}}}{\sqrt{3}-\sqrt{5}}\cdot\dfrac{1}{\sqrt[3]{2}:\sqrt{3}}=-\sqrt{3}:\sqrt[3]{2}$

2. $\dfrac{\sqrt{x^2-y^2}+\sqrt{x+y}}{\sqrt{x-y}}:\dfrac{\sqrt{x-y}+1}{\sqrt{x+y}}\cdot\dfrac{\sqrt{x}-\sqrt{y}}{x+y}=\dfrac{\sqrt{x+y-2\sqrt{xy}}}{\sqrt{x-y}}$ $\qquad x>y$

Risolvi:

3. $(1+\sqrt{3})^2\,x=(1+2\sqrt{3})(1-\sqrt{3})+\dfrac{13}{\sqrt{3}+4}+1$ $\qquad 0$

4. $\dfrac{x+7}{4-\sqrt{15}}+\dfrac{x-7}{4+\sqrt{15}}=x$ $\qquad -2\sqrt{15}$

5. $\dfrac{\sqrt{6}}{x-\sqrt{6}}+\dfrac{3}{x+\sqrt{6}}=\dfrac{9-2\sqrt{6}}{x^2-6}$ $\qquad 1$

6. $\dfrac{x-\sqrt{2}}{x^2+3+2x\sqrt{3}}-\dfrac{x}{x\sqrt{3}+3}=-\dfrac{\sqrt{3}}{3}$ $\qquad \dfrac{\sqrt{2}-\sqrt{3}}{2}$

7. $-\dfrac{2x}{\sqrt{3}+\sqrt{2}}\le 5\sqrt{6}+3+\dfrac{3x}{\sqrt{2}-\sqrt{3}}$ $\qquad x\le\sqrt{3}$

8. $2\sqrt{3}\,(x-2)+10\le 5x$ $\qquad x\ge 2$

9. $\begin{cases}(\sqrt{3}+1)\,x+(\sqrt{3}-1)\,y=4\\ \sqrt{6}\,x+\sqrt{2}\,y=4\sqrt{2}\end{cases}$ $\qquad \begin{cases}x=\sqrt{3}-1\\ y=\sqrt{3}+1\end{cases}$

10. $\begin{cases}x\,(2-\sqrt{3})+y\,(\sqrt{5}-1)=2-\sqrt{15}\\ x+y=\dfrac{1}{\sqrt{5}+2}\end{cases}$ $\qquad \begin{cases}x=\sqrt{5}\\ y=-2\end{cases}$

Totale punti 22,5. Sufficienza con punti 11,9.

BUON LAVORO!!!