

Problem of the Week-3

Posting Date 9/29/03. Submit solutions to Noah Aydin, RBH 309-A (e-mail or hard-copy) by 4 pm on 10/08.

Show that the real number

$$a = \sqrt[3]{7 + 5\sqrt{2}} + \sqrt[3]{7 - 5\sqrt{2}}$$

is in fact an integer.

(Obviously, a calculator or computer answer receives no credit. You must show this fact algebraically.)