

MTH 331 – Problem 2

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Problem 2: If a new addition for real numbers, denoted by the temporary symbol \boxplus , is defined by $a \boxplus b = 2a + b$, is \boxplus associative?

$$(a \boxplus b) \boxplus c = 4a + 2b + c$$

$$a \boxplus (b \boxplus c) = 2a + 2b + c$$

$4a + 2b + c \neq 2a + 2b + c$ so \boxplus is not associative.