

Chapter 1

Real Numbers

Assessment based on Exercise 1.1 Question 4

Question 1:

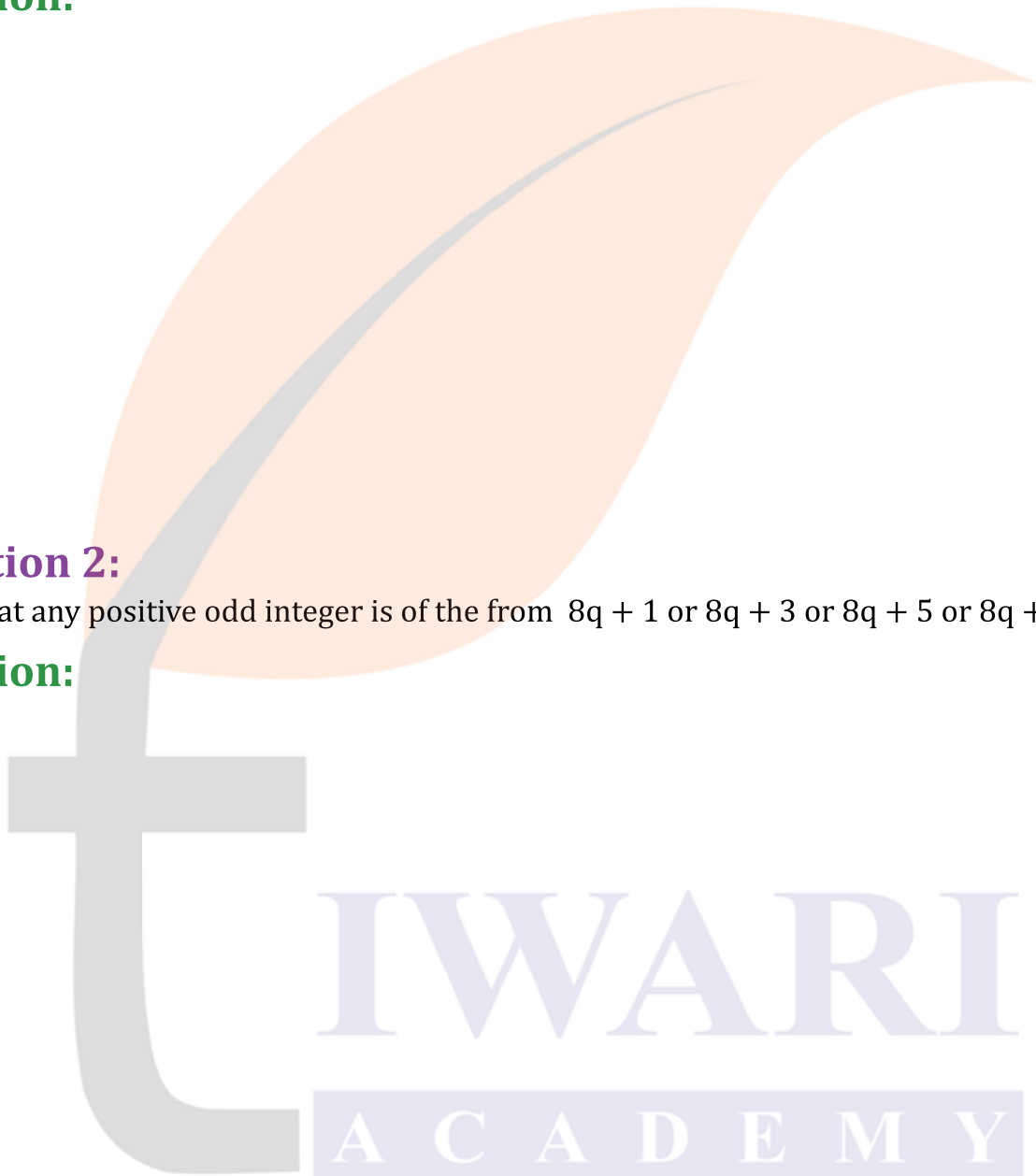
Show that the any positive even integer cannot be is of the form $5q + 2$ or $5q + 3$ for any intger.

Solution:

Question 2:

Show that any positive odd integer is of the from $8q + 1$ or $8q + 3$ or $8q + 5$ or $8q + 7$.

Solution:



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Question 3:

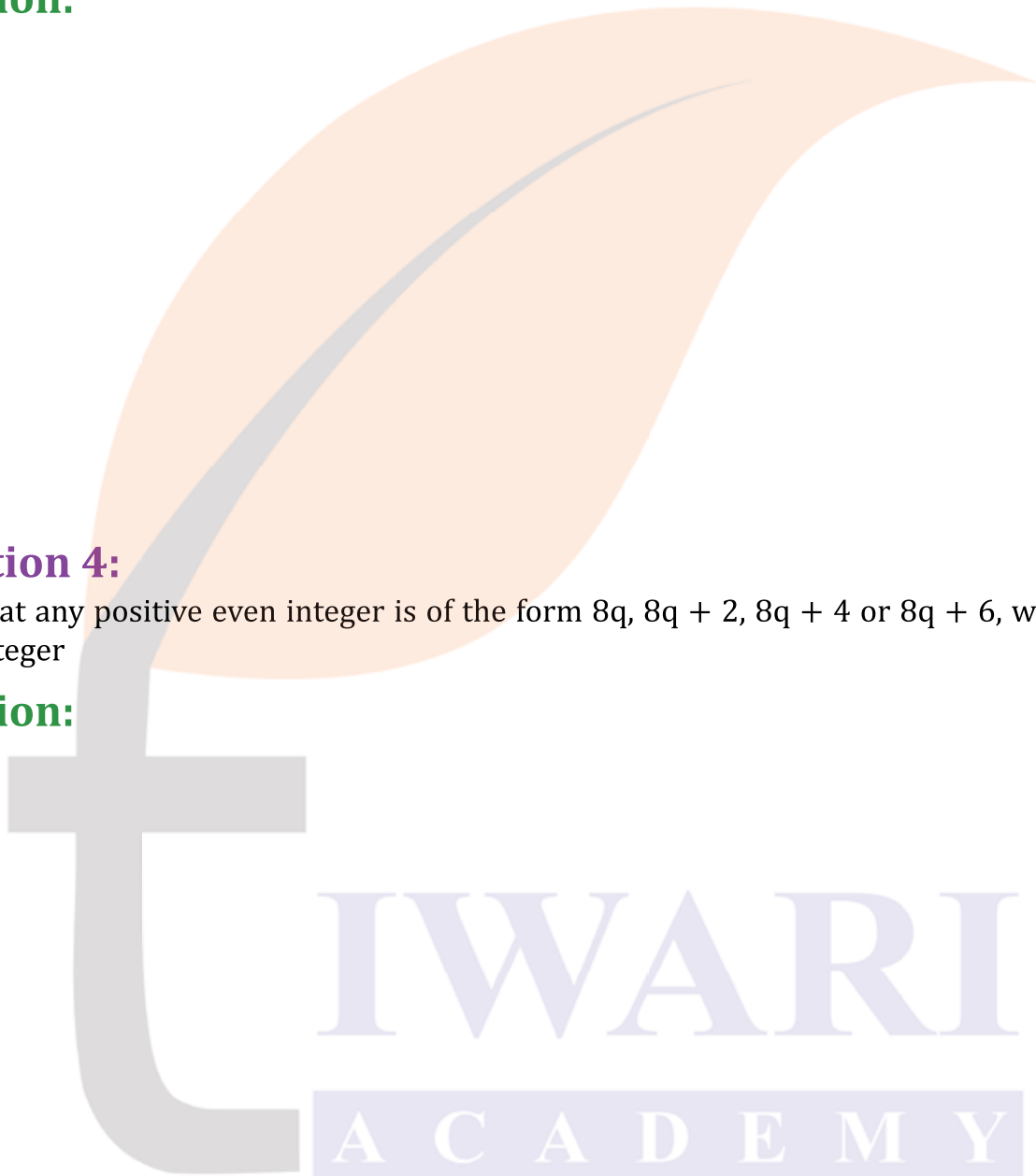
Show that the square of an odd positive integer is either of the form $6m + 1$ or $6m + 3$ for some integer

Solution:

Question 4:

Show that any positive even integer is of the form $8q$, $8q + 2$, $8q + 4$ or $8q + 6$, where q is some integer

Solution:



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Question 5:

Show that the cube of any positive integer is of the form $4m$, $4m + 1$ or $4m + 3$ for some integer m .

Solution:

Question 6:

Show that any positive even integer is of the form $4q$ or $4q + 2$ and any positive odd integer is of the form $4q + 1$ or $4q + 3$ where q is any integer.

Solution:

