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 squre 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 evev integer is of the from 4q or 4q +2 and any positive odd integer is of the form 4q + 1 or 4q + 3 where q is any integer.

Solution: