Real Numbers : Worksheet -10

1. Show that any positive odd integer is of the form $6q + 1$, or $6q + 3$, or $6q + 5$, where q is some integer.

2. An army contingent of 616 members is to march behind an army band of 32 members Ina parade. The two groups are to march in the same number of columns. What is the maximum number of columns in which they can march?

3. Use Euclid's division lemma to show that the square of any positive integer is either of the form $3m$ or $3m + 1$ for some integer m.
[Hint : Let x be any positive integer then it is of the form $3q$, $3q + 1$ or $3q + 2$. Now Square each of these and show that they can be rewritten in the form $3m$ or $3m + 1$.]

4. Use Euclid's division lemma to show that the cube of any positive integer is of the form $9m$, $9m + 1$ or $9m + 8$.