CARMEL ENGLISH SCHOOL,KALLATA

(Secondary & Senior Secondary School, Affiliated to CBSC, New Delhi)

COVID-19 HOLIDAY HOME ASSIGNMENT
SUBJECT: MATHEMATICS

Date : 15-21 APRIL 2020

REAL NUMBERS

Part 1

Real Numbers | NCERT Solutions for Class 10
Maths…: https://youtu.be/EmuNXZQehMM

Part 2
What are Real Numbers?: https://youtu.be/3YwrcJxEbZw

Part 3
Euclid's Division Lemma: https://youtu.be/S9KFVAIJmDE

Part 4
Real numbers - What is Fundamental theorem of Ari…: https://youtu.be/aaIKlXNblw4

Part 5
Revisiting Irrational Number | Real Numbers | CBS…: https://youtu.be/Srf9jQYspoo

Part 6
Revisiting Rational Numbers and Their Decimal
Exp…: https://youtu.be/JI0mx94tNHM

Part 6
What are real numbers? Real numbers summary.: https://youtu.be/lSXC1jU7RRM

EXERCISES

1.Use Euclid's division algorithm to find the HCF of :

(i) 135 and 225   (ii) 196 and 38220   (iii) 867 and 255

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

where q is some integer.

3. An army contingent of 616 members is to march behind an army band of 32 members in a 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?

4. 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.]

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

4. Given that HCF (306, 657) = 9, find LCM (306, 657).

5. Check whether 6n can end with the digit 0 for any natural number n.

6. Explain why 7 × 11 × 13 + 13 and 7 × 6 × 5 × 4 × 3 × 2 × 1 + 5 are composite numbers. 7. There is a circular path around a sports field. Sonia takes 18 minutes to drive one round of the field, while Ravi takes 12 minutes for the same. Suppose they both start at the same point and at the same time, and go in the same direction. After how many minutes will they meet again at the starting point?

7. Write down the decimal expansions of those rational numbers in Question 1 above which have terminating decimal expansions.

8. The following real numbers have decimal expansions as given below. In each case, decide whether they are rational or not. If they are rational, and of the form , p q what can you say about the prime factors of q?

 (i) 43.123456789　　　　 (ii) 0.120120012000120000. . .　　 (iii) 43.123456789