EXERCISE 5.5 PAGE NO: 5.16

1. Find six rational numbers between (-4/8) and (3/8)

Solution:
We know that between -4 and -8, below mentioned numbers will lie
-3, -2, -1, 0, 1, 2.
According to definition of rational numbers are in the form of (p/q) where q not equal to zero.
Therefore six rational numbers between (-4/8) and (3/8) are
(-3/8), (-2/8), (-1/8), (0/8), (1/8), (2/8), (3/8)

2. Find 10 rational numbers between (7/13) and (- 4/13)

Solution:
We know that between 7 and -4, below mentioned numbers will lie
-3, -2, -1, 0, 1, 2, 3, 4, 5, 6.
According to definition of rational numbers are in the form of (p/q) where q not equal to zero.
Therefore six rational numbers between (7/13) and (-4/13) are
(-3/13), (-2/13), (-1/13), (0/13), (1/13), (2/13), (3/13), (4/13), (5/13), (6/13)

3. State true or false:
(i) Between any two distinct integers there is always an integer.
(ii) Between any two distinct rational numbers there is always a rational number.
(iii) Between any two distinct rational numbers there are infinitely many rational numbers.

Solution:
(i) False

Explanation:
Between any two distinct integers not necessary to be one integer.

(ii) True

Explanation:
According to the properties of rational numbers between any two distinct rational numbers there is always a rational number.

(iii) True

Explanation:
According to the properties of rational numbers between any two distinct rational numbers there are infinitely many rational numbers.