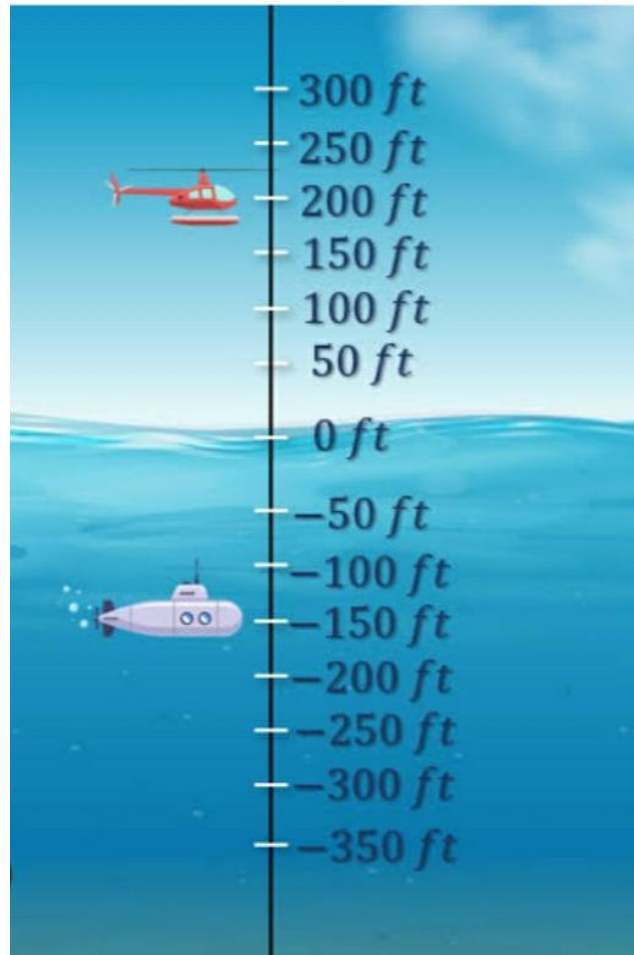


CASE STUDY 1

In a helicopter, Virat is 200 feet above sea level and in a submarine, Rohit is 150 feet below sea level. The speed of the helicopter is 150 feet/sec and the speed of the submarine is 3 feet/sec.



Q(1). How far Virat and Rohit were from each other initially?

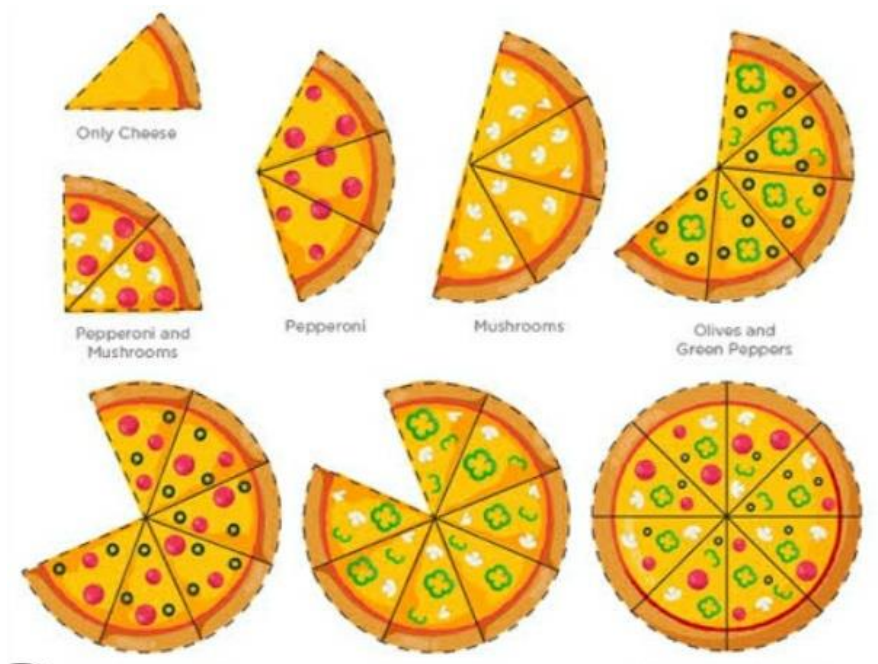
Q(2). If the helicopter moves down for 1 sec and stop there and the submarine moves up for 15 sec stop there then how apart will they be from each other?

Q(3). If the submarine moves up for 2 sec at 10 a.m then moves down for 4 sec at 11a.m again moves up for 5 sec at 12noon and finally moves down for 6 sec at 1p.m respectively then where will it be after moving down at 1p.m?

Q(4) Find the distance between Virat and Rohit if Virat moves up for 2sec then moves down for $\frac{1}{2}$ sec and Rohit moves down for 8 sec then moves up for 5 sec.

Q(5). If the speed of the helicopter increase by 50 feet/sec and it moves down for a sec then how much feet the submarine should move up so that the submarine and the helicopter will reach at the same place?

CASE STUDY 2



Riya, Tanaya and Sneha are 3 friends. Oneday, they decided to have pizza at evening. So they bought a pizza and divided it into 24 equal parts. Riya took $\frac{5}{24}$ parts, Tanaya took $\frac{7}{24}$ parts and Sneha took $\frac{6}{24}$ parts from it.

Answer the following questions from the above case study :

Q(1). How many parts of the pizza are still left?

Q(2). If Riya takes three more parts from the left then the total part of her is how much more than that of Sneha?

Q(3). If Tanaya takes two more parts, Sneha and Riya divide the rest parts between them equally, then what would be the difference between the total parts of Sneha and total parts of Riya?

Q(4). Who amongst them can't take exactly the same parts like previous from the rest parts of pizza?

Q(5). One of the three friends would take exactly the same parts like previous and the rest would not take any of the parts. As a result, there would be no part left. Identify the friend who would take such parts.

Q(6). Add Riya's with Sneha's parts and subtract Tanaya's parts from it.

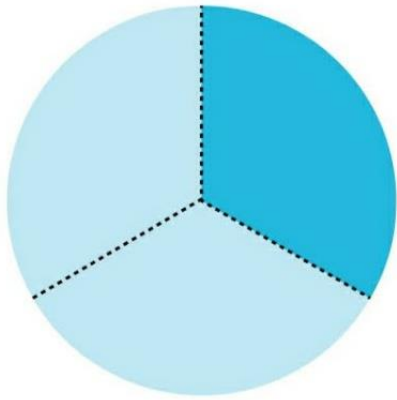
Q(7). Find the sum of reciprocals of Sneha's and Riya's parts.

Q(8). Write the multiplicative inverse of Tanaya's parts.

Q(9). Find the product of reciprocals of Riya's and Sneha's parts.

Q(10). Divide Tanaya's parts by Riya's parts.

CASE STUDY 3



$$\frac{1}{3}$$

$$7 \times \frac{1}{3}$$

Answer the following questions for the above fraction :

Q(1). Represent the given fraction using seven figures.

Q(2). How many unshaded parts are there in each figure?

Q(3). Represent the same fraction by less number of figures.

Q(4). How many minimum number of figures are required for representing it?