

CCT Weekly Practice (Mathematics)

Let's go Gymming

Two siblings – Parag and Rashmi are on a fitness mission. They start exploring two gyms that are nearby - **Healthy Gym** and **Stay Fit Gym**.

The membership plan for both the GYM's is mentioned below:

Healthy Gym: Rs. 700/- for a monthly pass for an individual, then pay Rs. 50/- for each visit (day) that you decide to go to the gym.

Stay Fit Gym: Rs. 0/- for a monthly pass for an individual, also pay Rs. 120/- for each visit (day) that you go to the gym.

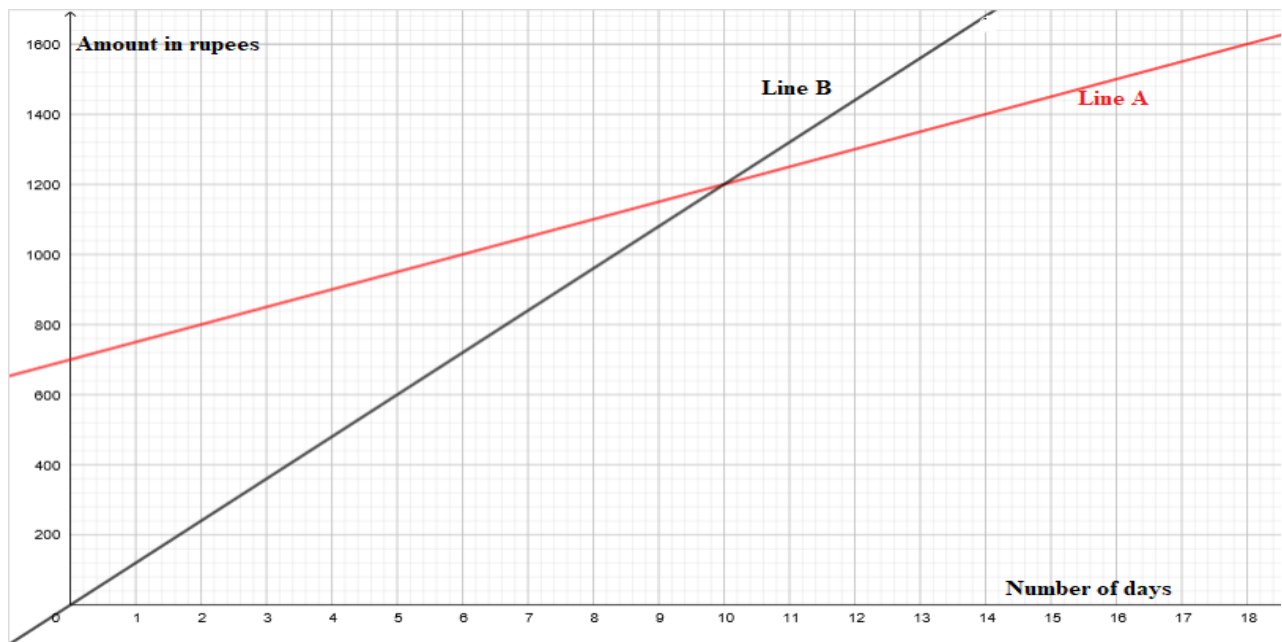
HEALTHY GYM	STAY FIT GYM
	
Rs. 700/- for one monthly pass + Rs. 50/- per visit	Rs. 0/- for one monthly pass + Rs. 120/- per visit

Question 1:

If y represents total money spent and x represents the number of days that one decides to go to the gym, then which of the following choices below would represent the situations of the two gyms?

a)	$y = 700x$	$y = 120x$
b)	$y = 50x$	$y = 700 + 120x$
c)	$y = 50x + 120$	$y = 700$
d)	$y = 700 + 50x$	$y = 120x$

The total amount for numbers of days that you go to the gym are represented by the lines in the Cartesian Plane below, where the axes are labelled correspondingly.



Question 2:

Mention the line numbers for the two gyms:

Healthy Gym:

Stay Fit Gym:

Question 3:

Parag goes to the Healthy Gym and Rashmi decides to go to Stay Fit Gym. Their father decides to give equal money for their visits to the Gym and he asks for the least number of days possible so that the total cost for both the Gyms is same. What is the least possible number of days and the total cost for two of them?

Number of days:

Total Cost:

Question 4:

If both Parag and Rashmi visit their respective gyms for 6 days, then the difference between the total amount is Rs

Question 5:

What is the number of days for which the difference in total amount is same as in Question 4?

- a) 6 days
- b) 10 days
- c) 12 days
- d) 14 days

Question 6:

Which gym is more economical for a month (if the average number of days in a month = 22)?

Prepared by:-

Ms. Praveen Ralhan, Step By Step School, Noida

CCT Weekly Practice (Mathematics)

ANSWER KEY:

Let's go to Gym

1. Option D: $y = 700 + 50x$; $y = 120x$

2. Healthy Gym : **Line A** Stay Fit Gym: **Line B**

3. Number of days: **10** Total Cost: **Rs. 1200/-**

The point of intersection of two lines is the required answer and the point is (10, 1200).

It can also be calculated using equations of lines.

Line A: Total cost = $700 + 50 \times 10 = 700 + 500 = 1200$

Line B: Total cost = $120 \times 10 = 1200$

2nd method: by solving equation $700 + 50x = 120x \Rightarrow 700 = 120x$

$$\Rightarrow 700 = 70x \Rightarrow x = 10, \text{number of days}$$

$$\text{Total cost} = 120 \times 10 = \square 1200$$

4. Rs. 280/-

(For 6 days Healthy gym = $700 + 50 \times 6 = 700 + 300 = 1000$

Stay Fit gym = $120 \times 6 = 720$

Difference = $1000 - 720 = 280$)

5. Option D: 14 days

1st method: using calculations

2nd method: using the graph (6 days is 4 days less than 10, so similarly next days will be 4 days more than 10 days, which equals 14 days)

6. Healthy Gym

1st method: by observing graphs where red line is below the black line.

2nd method: by calculation:

Healthy gym: $700 + 50 \times 22 = 700 + 1100 = 1800$

Stay Fit gym: $120 \times 22 = 2640$

Prepared By:-

Ms. Praveen Ralhan, Step by Step School, Noida.