

INDIAN SCHOOL AL WADI AL KABIR Dept. of Mathematics 2021 – 2022 Class X – Revision Work Sheet – Pre-Mid Term Case Study Questions



	Case Study 1:		DOWNSTREAM (a)	UPSTREAM (b)
	Mathematics teacher	er of a school took the		
	standard 10 studer	its to see the painting	N N	
	exhibition which	was held at ART		
	COLLEGE OF EDU	JCATION, Bangalore. It		
	is the part of art into	egration of Mathematics.		
	The teacher and s	students had interest in		
	painting as well. St	udents were eager to see	Direction of Boat	Direction of Boat
	the above paintings	. The teacher explained		
	that the above painti	ngs are based on concept		
	of a pair of linear eq	uations of two variables.		
1	If the speed of boat	is 5 km/hr and speed of st	ream is 2 km/hr. What is	the speed of the boat in
	Downstream?			
	a) 5km/hr	b) 2km/hr	c) 7km/hr	d) 3km/hr
		-)	-) ·	-)
	If the smood of heat	is 5 law /her and arread of st	man in 2 land /han W/h at in	the enced of the boot in
2	If the speed of boat	is 5 km/nr and speed of st	ream is 2 km/nr. what is	the speed of the boat in
	Opstream?			
	a) 5km/hr	b) 2km/hr	c) 7km/hr	d) 3km/hr
3	A boat goes 21 km c	downstream. What is the ti	ime required to cover it?	
5	a) 5km/hr	b) $2km/hr$	c) 7 km/hr	d) 3km/hr
		0) 2km/m	c) / Kiii/ iii	d) Skill/III
		T (XX 71 (1 (1	· 1.4 · · · · · 0	
4	A boat goes 12 km (Jp stream. What is the tim	te required to cover it?	
	a) 4km/hr	b) 2km/hr	c) 6 km/hr	d) 3km/hr
5	If speed of boat and	stream be and y km/hr x	<i>km/hr</i> respectively. What	t is the distance covered
5	by down steam boat	in 't'hours?	1 V	
	a) $t(x - y)km$	b) $t(x + y)km$	c) $2t(x - y)km$	d) $2t(x + y)km$
				a) 2i(x + y)im
	Case Study 2:			The mate
	Teachers and stude	nts of class X of a school	ol had	
	gone to Nandan Kan	nan for study tour. After v	isiting	AND
	different places of	Nandan Kannan, lastly.	they NANDAN KANAN	ZOOLOGICAL PARK
	visited bird's sanctu	uary and deer park. Roha	n is a	LINDA THE REAL
	clever boy and keen	observer. He put the quest	tion to	
	his friends "How r	nany birds are there and	l how	
	many deer are there	e (at particular time) in N	andan	
	Kannan?" Rahul's f	friend, Nishith gave the c	orrect	A CONTRACTOR
	answer as follows:	, 0		
	'Nishith answered th	hat total animals have 100	0 eyes	
	and 1400 legs.'		-	

0	If x and y be the number of birds and deer respectively, what is the equation of total number of eyes?					
	a) $x + y = 1000$	b) $x + y = 500$	c) $x - y =$	= 1000 d) $x - y = 500$		
7	What is the equation	on of total number of l	egs?			
	a) $2x + y = 70$	b) $x + 2y = 500$	c) $x + 2y$	= 700 d) $2x - y = 500$		
8	How many birds an	re there in the Zoo?				
	a) 1000	b) 5000	c) 300	d) 200		
9	How many deer are there in the Zoo?					
-	a) 500	b)200	c)300	d)700		
10	Total number of ar	nimals (birds and deer)) is			
	a) 1000	b)700	c)500	d)300		
	Case Study 3:					
	such as inflation (a general increase in prices and fall in the purchasing value of money) on different types of vehicles like auto, Rickshaws, taxis, Radio cab etc. The auto charges in a city comprise of a fixed charge together with the charge for the distance covered. Study the following situations					
	Name of the city	Distance travelled (Km)	Amount paid (Rs.)			
	Older A	18	77			
	City A	10	/6			
	City B	10	70 110 91			
	City B	10 15 8 14	75 110 91 145			
	City B Situation 1: In city km, the charge paid Situation 2: In a c	10 15 8 14 y A, for a journey of 1 d is Rs 110. city B, for a journey of	75 110 91 145 0 km, the charge pa of 8km, the charge	aid is Rs 75 and for a journey of 15		
	City B Situation 1: In city km, the charge paid Situation 2: In a city 14km, the charge paid	10 15 8 14 y A, for a journey of 1 d is Rs 110. city B, for a journey of baid is Rs 145.	75 110 91 145 0 km, the charge pa	aid is Rs 75 and for a journey of 15 paid is Rs91 and for a journey of		
11	City B Situation 1: In city km, the charge paid Situation 2: In a constraint of the charge paid (Refer situation 1) y km/hr, the pair of the constraint	10 15 8 14 y A, for a journey of 1 d is Rs 110. city B, for a journey of 2 oaid is Rs 145. If the fixed charges of 1 In the fixed charges of 1 In the fixed charges of 1	110 91 145 0 km, the charge pa of 8km, the charge f auto rickshaw be esenting the situation	aid is Rs 75 and for a journey of 15 paid is Rs91 and for a journey of Rs x and the running charges be Rs on is		
11	City A City B Situation 1: In city km, the charge paid Situation 2: In a constraint of the charge paid (Refer situation 1) y km/hr, the pair of the constraint of the charge paid a) x + 10y =110, x	10 15 8 14 14 14 15 15 14 14 14 14 14 14 14 14 14 15 16 17 17 18 19 10 10 10 10 10 10 10 10 10 10	75 110 91 145 0 km, the charge part of 8km, the charge f auto rickshaw be esenting the situation b) x + 10y =75, x	aid is Rs 75 and for a journey of 15 paid is Rs91 and for a journey of Rs x and the running charges be Rs on is x + 15y = 110		
11	City A City B Situation 1: In city km, the charge paid Situation 2: In a constraint of the charge paid (Refer situation 1) y km/hr, the pair of the constraint of the charge paid (Refer situation 1) y km/hr, the pair of the constraint of	10 15 8 14 14 15 15 15 16 17 17 17 17 17 17 17 17 17 17	f auto rickshaw be esenting the situation b) $x + 10y = 75$, x d) $10x + y = 75$,	aid is Rs 75 and for a journey of 15 paid is Rs91 and for a journey of 15 Rs x and the running charges be Rs on is x + 15y = 110 15 x + y = 110		
11	City A City B Situation 1: In city km, the charge paid Situation 2: In a constraint of the charge paid (Refer situation 1) y km/hr, the pair of the constraint of the charge paid (Refer situation 1) y km/hr, the pair of the constraint of the constraint of the charge paid (Refer situation 1) (Refer situation 1)	10 15 8 14 14 14 15 15 16 17 17 18 19 19 10 10 10 10 10 10 10 10 10 10	75 110 91 145 0 km, the charge part of 8km, the charge f auto rickshaw be esenting the situation b) x + 10y =75, x d) 10x + y = 75, stance of 50km. The	aid is Rs 75 and for a journey of 15 paid is Rs91 and for a journey of 15 Rs x and the running charges be Rs on is x + 15y = 110 15 x + y = 110 e amount he has to pay is		
11	City A City B Situation 1: In city km, the charge paid Situation 2: In a city 14km, the charge paid (Refer situation 1) y km/hr, the pair of a) $x + 10y = 110$, x c) $10x + y = 110$, 12 (Refer situation 1) a) Rs.155	10 15 8 14 14 15 15 15 16 17 18 14 14 14 14 14 14 14 14 14 14	75 110 91 145 0 km, the charge part of 8km, the charge part of 8km, the charge f auto rickshaw be esenting the situation b) x + 10y = 75, x d) 10x + y = 75, stance of 50km. That c) Rs.355	aid is Rs 75 and for a journey of 15 paid is Rs 91 and for a journey of 15 paid is Rs91 and for a journey of Rs x and the running charges be Rs on is x + 15y = 110 15 x + y = 110 e amount he has to pay is d) Rs.455		
11 12	City A City B Situation 1: In city km, the charge paid Situation 2: In a city 14km, the charge paid (Refer situation 1) y km/hr, the pair of a) $x + 10y = 110$, x c) $10x + y = 110$, 13 (Refer situation 1) a) Rs.155 (Refer situation 2)	10 15 8 14 14 15 15 15 16 17 17 18 19 19 10 10 10 10 10 10 10 10 10 10	75 110 91 145 0 km, the charge part of 8km, the charge f auto rickshaw be esenting the situation b) x + 10y =75, x d) 10x + y = 75, stance of 50km. That c) Rs.355 ave to pay for trave	aid is Rs 75 and for a journey of 15 paid is Rs 91 and for a journey of 15 Rs x and the running charges be Rs on is x + 15y = 110 15 x + y = 110 e amount he has to pay is d) Rs.455 Elling a distance of 30km?		