

CLASS: XII
APPLIED MATHEMATICS (241)
MCQ REVISION WORKSHEET
TOPIC: Quantification and Numerical Inequalities

Q1. The ration in which a grocer mixes two varieties of pulses costing Rs. 85 per kg and Rs. 100 per kg respectively, so as to get a mixture worth Rs. 92 per kg is

(a)	7:8	(b)	8:7
(c)	5:7	(d)	7:5

Q2. 30 litres of a mixture contains milk and water in the ratio 1:5. The amount of milk, in litres to be added to the mixture so as to have milk and water in the ratio 2:5 is

(a)	10 litres	(b)	5 litres
(c)	7 litres	(d)	8 litres

Q3. In what ratio shall one add water to liquid detergent costing Rs. 480 per litre to get resulting mixture worth Rs. 300 per litre?

(a)	5:3	(b)	3:8
(c)	3:5	(d)	5:8

Q4. Aman can row a boat along the stream of river at 10 km/hour and against the stream in 6 km/hour. The speed of the stream is-

(a)	1 km/hour	(b)	2 km/hour
(c)	4 km/hour	(d)	5 km/hour

Q5. A girl can swim a certain distance downstream in 3 hours and returns back the same distance upstream in 6 hours. If the speed of stream is 2 km/hour, then the speed of the man in still water is-

(a)	5 km/hour	(b)	6 km/hour
(c)	4 km/hour	(d)	8 km/hour

Q6. A motor boat can row at a speed of 12 km/hour in still water. If the river is flowing at 4 km/hour and it takes 9 hours for a round trip, find the distance between two places.

(a)	48 km	(b)	54 km
(c)	64 km	(d)	80 km

Q7. Pipe A and B can individually fill an empty tank in 20 minutes and 30 minutes respectively. If both pipes are opened together then the time taken to fill the empty tank is

(a)	10 minutes	(b)	12 minutes
(c)	15 minutes	(d)	18 minutes

Q8. Pipe A and B can individually fill an empty tank in 8 hours and 6 hours respectively, whereas pipe C can empty it in 12 hours. If all the three pipes are opened together, then time taken to fill the tank is

(a)	2 hours	(b)	4 hours
(c)	$4\frac{4}{5}$ hours	(d)	$4\frac{1}{8}$ hours

Q9. Two pipes A and B can fill a tank in 50 minutes and 60 minutes respectively. Both pipes are opened. The tank will be filled in 36 minutes, if the pipe A is turned off after

(a)	16 minutes	(b)	25 minutes
(c)	20 minutes	(d)	10 minutes

Q10. In 100 m race, A finishes in 36 seconds and B in 45 seconds. Find the distance by which A beats B.

(a)	25 m	(b)	20 m
(c)	15 m	(d)	12 m

Q11. In a kilometer race, A beats B by 50 m or 10 seconds. The time taken by B to complete the race is-

(a)	90 seconds	(b)	190 seconds
(c)	150 seconds	(d)	200 seconds

Q12. In a 150 m race A beats B by 30 m and C by 15 m. In a race of 540 m between B and C, find by how much distance C will beat B?

(a)	60 m	(b)	20 m
(c)	15 m	(d)	5 m

Q13. If $3x \geq -5$, then

(a)	$-3x < 5$	(b)	$-3x \geq -5$
(c)	$-3x \leq 5$	(d)	$x \geq \frac{5}{3}$

Q14. The solution set of the inequation $|x + 2| < 5$, where $x \in \mathbf{R}$ is –

(a)	$[-7, 3]$	(b)	$(-7, 3)$
(c)	$(-7, 3]$	(d)	$[-7, 3)$

Q15. The solution set of $\frac{x-3}{x+5} > 0$, $x \neq -5$, $x \in \mathbf{R}$ is –

(a)	$x > 3$	(b)	$x < -5$
(c)	$x < -5$ or $x > 3$	(d)	No solution