

INDIAN SCHOOL AL WADI AL KABIR Class VIII, Mathematics (2025-26) DIRECT AND INVERSE PROPORTION

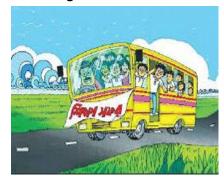
WORKSHEET-1

Multiple Choice Questions								
Q.1	If 5	If 5 pencils cost ₹20, how much will 8 pencils cost?						
	A	₹30	В	₹32	С	₹28	D	₹40
Q.2	If x	If x and y are directly proportional, then which one is true?						
	Α	x + y = constant	В	x y = constant	С	$\frac{x}{y}$ = constant	D	x - y = constant
Q.3	A c	A car travels 120 km in 3 hours. At the same speed, how far will it travel in 5 hours?						in 5 hours?
	A	150 km	В	180 km	С	200 km	D	220 km
Q.4	A machine takes 6 hours to fill 48 containers. How many containers will it fill in a day?							
	A	112 containers	В	142 containers	С	182 containers	D	192 containers
Q.5	A recipe uses 500 g of onion for 5 people. How many grams of onion is required for serving 9 people?							
	A	800 g	В	400g	С	900 g	D	2,600 g
Q.6	If x and y vary directly, $x=16$, when $y=20$. When $x=28$ find the value of y.							
	A	35	В	45	С	40	D	30
Q.7	If x and y are directly proportional under the given condition in the table, the constant of variation is:							
	A	$\frac{2}{3}$	В	$\frac{1}{3}$	С	$\frac{1}{4}$	D	<u>1</u> 5
Q.8		For every five days' work, Gokul gets two days of holidays. If he works for 20 days, how many days of holidays he can enjoy?						
	A	8 days	В	5 days	С	4 days	D	10 days

Q.9	On a map, 1 cm represents 5 km. If the distance between two cities on the map is 7.2 cm, what is the actual distance between the two cities?							
	Α	29 km	В	30 km	С	46 km	D	36 km
Q.10	The	The perimeter of a square and its side is in:						
	Α	Direct Proportion	В	Inverse Proportion	С	Neither direct nor inverse	D	Cannot be determined
		LONG ANSWER QUESTIONS:						
Q.11	Anu has painted a 40m² wall and she has used 8 pots of red paint. Jim wants to paint a 25m² wall. How many pots of paint does he need?							
Q.12	The cost of 8 kg of apples is ₹480. (a) Find the cost of 15 kg of apples. (b) If you have ₹1440, how many kilograms of apples can you buy?							
Q.13	Giv	en that x and y ar x 7 y 28	e direct a 52	21	, find the 32	e missing values a	ı, b, ā	and c.
Q.14	a) l	A train is moving at a uniform speed of 75 km/hour a) How far will it travel in 20 minutes? b) Find the time required to cover a distance of 250 km.						
Q.15	Raj bought 35 packs of crayon for ₹700. Roy bought 7 packs of the same type of crayons. How much did Roy pay for it?							
Q.16	An electric pole, 14 m high, casts a shadow of 10 m. Find the height of a tree that casts a shadow of 15 m under similar conditions also find the length of the shadow cast by the 63 m high building under similar conditions.							
Q.17	A truck needs 34 litres of diesel for covering 204 km. Find the diesel required by the truck to cover a distance of 300km.							
Q.18	A machine prints 540 pages in 6 hours. a) How many pages will it print in 10 hours? b) If the machine needs to print 1,800 pages, how many hours will it take?							
Q.19	If 36 books are packed in 2 cartons of the same size, how many such cartons will be required to pack 144 books?							

Case Study: A school is planning a picnic for students. The teachers decided to book buses for transportation. Each bus has the same seating capacity. The following data was collected:

Number of Students	60	120	180	240	?
Number of Buses	2	4	6	?	10



Q.20 Based on the given information, answer the following questions:

- a) How many students can be accommodated in 1 bus?
- b) If 240 students are going, how many buses will be required?
- c) If the school hires 10 buses, how many students can go on the picnic?
- d) Is the number of students directly proportional to the number of buses? If so, find the constant of variation.

ANSWERS

Q1. B	Q2. C	Q3. C	Q4. D	Q5. C
Q6. A	Q7. B	Q8. A	Q9. D	Q10. A
Q11. 5 pots	Q12. a)900 b) 24 kg	Q13. a=13 b=84 c=148	Q14. a)20 km b) 200 minutes	Q15. ₹140
Q16. 21m	Q17. 50 litre	Q18. a) 900 pages b) 20 hours	Q19. 8 cartons	Q20 a) 30 students b) 8 buses c) 300 students d) Yes, 30