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

Multiple Choice Questions

Q.1. A car takes one hour to cover a certain distance at 90 km/h. If the car moves at the speed of 100 km/h, the time taken to cover the distane will be:

	A	56 mins	B	55 mins	C	54 mins	D	64 mins

Q.2. If 76 men can dig a pond in 21 days. The number of men required to dig the same pond in 19 days will be:

	A	87	B	84	C	96	D	83

Q.3. For a group of 20 students food lasts for 78 days. For how many days will the same food last for 104 students?

	A	24 days	B	10 days	C	17 days	D	15 days

Q.4. In the given table, if x and y varies inversely, the constant of proportionality will be____.

X	3	45	10	6	18
Y	30	2	9	15	5

	A	$\frac{1}{10}$	B	$\frac{10}{9}$	C	90	D	$\frac{2}{3}$

Q.5. If 6 persons can finish a job in 10 days, then 3 persons will finish the same job in ___ days.

	A	30 days	B	20 days	C	60 days	D	18 days

Q.6. A truck covers a particular distance in 2 hours with a speed of 40 miles per hour. If the speed is increased by 10 miles per hour, find the time taken by the truck to cover the same distance?

	A	1 hour	B	1.5 hours	C	2 hours	D	1.6 hours

Q.7. There is enough food to last for 40 people for 10 days. If 10 more people join them, the food will last for

	A	10 days	B	12 days	C	8 days	D	6 days

Q.8. If xy=5, then x *and* y are in _____ proportion.

	A	Inverse	B	Neither direct nor inverse with each other	C	Sometimes direct and sometimes inverse with each other	D	Direct

Q.9 It is given that l varies inversely as m.

<table>
<tr><td></td><td colspan="8">(i) Write an equation which relates l and m.
(ii) Find the constant of proportion (k), when l is 6 then m is 18.</td></tr>
<tr><td></td><td>A</td><td>$\frac{l}{m} = k,\ k = 6$</td><td>B</td><td>$\frac{l}{m} = k,\ k = \frac{1}{3}$</td><td>C</td><td>$l \times m = k,$
$k = 108$</td><td>D</td><td>$\frac{l}{m} = k,\ k = 3$</td></tr>
<tr><td>Q10</td><td colspan="8">If x varies inversely as y, then fill in the box
<table><tr><td>x</td><td>____</td><td>60</td></tr><tr><td>y</td><td>2</td><td>10</td></tr></table></td></tr>
<tr><td></td><td>A</td><td>12</td><td>B</td><td>300</td><td>C</td><td>500</td><td>D</td><td>120</td></tr>
<tr><td></td><td colspan="8">LONG ANSWER QUESTIONS:</td></tr>
<tr><td>Q.11</td><td colspan="8">If a rope makes 240 rounds of a cylinder with base radius 16 cm. Find the number of rounds the same can make on a cylinder with base radius 10 cm. (2M)</td></tr>
<tr><td>Q.12</td><td colspan="8">If x and y vary inversely and x = 5 when y = 32, then find x when y =20. (2M)</td></tr>
<tr><td>Q.13</td><td colspan="8">7 pipes can fill a tank in 1 hour 30 minutes. How long will it take to fill the tank if 9 pipes of the same type are used? (2M)</td></tr>
<tr><td>Q.14</td><td colspan="8">A contractor undertook a contract to complete a part of a stadium in 9 months with a team of 560 persons. Later on, it was required to complete the job in 5 months. How many extra persons should he employ to complete the work? (CBQ)</td></tr>
<tr><td>Q.15</td><td colspan="8">If 52 men can do a piece of work in 35 days, how many men will do it in 14 days?</td></tr>
<tr><td>Q16</td><td colspan="8">A shopkeeper has enough money to buy 40 books, each costing Rs125. How many books he can buy if he gets a discount of Rs 25 on each book?</td></tr>
<tr><td>Q.17</td><td colspan="8">A classroom of 24 students can finish a project within 5 days.
a) How many more students are required to complete the same project within 3 days?
b) How many days it will take to complete the same project if 6 more students join in the classroom ?</td></tr>
<tr><td>Q.18</td><td colspan="8">Which of the following quantities vary directly or inversely with each other
a. Number of pens and their cost
b. Distance travelled (at constant speed) and petrol used.
c. Number of men available and time taken to do a job.
d. Area of land and its price.</td></tr>
<tr><td>Q19</td><td colspan="8">If x and y vary inversely, Complete the table by finding the values of A, B, C and D</td></tr>
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X	30	A	10	C	D
Y	5	3	B	75	50

Q20

CASE STUDY-1:

For the overall development of students, the school organised an Interschool Exchange Program. As part of this event, the students were given complete responsibility to manage the arrangements under the guidance of a teacher. They were required to look after the seating arrangements, food packets, transport, cultural events, and stage decoration. This gave them an opportunity to experience real-life problem-solving, teamwork, and time management while applying concepts of mathematics in practical situations.

On the basis of the above context, answer the following questions:

i) The seating arrangement was made by 12 students in 18 hours. If the school wanted to finish it in 9 hours, how many students would be needed?

ii) If 15 students can build a wall in 48 hours, how many students will be required to do the same work in 30 hours?

iii) A group of 6 students managed the distribution of certificates in 30 minutes. If only 3 students are available, how much time will they take to complete the same task?

iv) 26 men can do a piece of work in 18 days. If the work is to be completes in 13 days, how many more men need to be hired?

Answers									
1	C	2	B	3	D	4	C	5	B
6	D	7	C	8	A	9	C	10	B
11	384	12	8	13	70 mins	14	448	15	130
16.	50	17	i)16 ii)4	18	a. direct b. direct c. inverse d. direct	19	A=50 B=15 C=2 D=3	20	i)24 ii)24 iii)60 mins iv)10