# INDIAN SCHOOL AL WADI AL KABIR
**Class VIII**, Mathematics (2023-24)
**Worksheet DTQ, CHAPTER**: DIRECT AND INVERSE PROPORTION

Department of Mathematics

## SHORT ANSWER TYPE QUESTIONS- 7 QUESTIONS. (2 Marks each)

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|---|---|
| **Q.1** | In 8 days, a machine cleans $6.4 \times 10^7$ kg weight of iron ore. How much iron ore will it clean in 44 days. |
| **Q.2** | Mary types 775 words in 25 minutes. How many words would he type in 10 minutes? |
| **Q.3** | If x varies directly with y and x = 15 when y = 75. Find the value of y when x=7. |
| **Q.4** | If 25 workers can do a job in 8 hours, then how many workers working at the same rate will be required to do the same job in 5 hours? |
| **Q.5** | The cost of 15m cloth is ₹ 360. Find the cost of 5.25m of the same cloth. |
| **Q.6** | If x and y vary inversely to each other and x=24 when y = 10, then find y when x = 6. |
| **Q.7** | If Naresh walks 250 steps to cover a distance of 200 metres, find the distance travelled in 350 steps. |

## SHORT ANSWER TYPE- 5 QUESTIONS. (3 Marks each)

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|---|---|
| **Q.8** | In a school camp, there was enough food for 8 students for 30 days. If 12 more students join, how many days will the food last? |
| **Q.9** | In a garrison, there is sufficient food for 300 soldiers for 28 days. If 36 more soldiers join the garrison, how long would the food last? |
| **Q.10** | Simran has road map with scale 1 cm: 35 km. How much distance will be covered on the map, if she drives for 1750 km? (C B Q) |
| **Q.11** | 600 men can finish a stock of food in 80 days. How many more men should join them to finish the same stock in 60 days? |
| **Q.12** | A car covers a distance of 210 km in 12 litres of petrol. (CBQ) <br> (i)      Find the distance travelled in 22 litres of petrol? <br> (ii)     How much petrol will be required to travel 350km? |

## LONG ANSWER TYPE- 3 QUESTIONS. (4 Marks each)

| | |
|---|---|
| **Q.13** | State x and y vary directly or inversely and find the constant of variation. <table><tr><td>**x**</td><td>16</td><td>4</td><td>64</td></tr><tr><td>**y**</td><td>8</td><td>32</td><td>2</td></tr></table> |
| **Q.14** | 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) |

| | The following table represents heights of the poles (in m) with their corresponding lengths of shadows formed (in m): Find the value of a, b, c and d. |
|---|---|
| **Q.15** | |

| Heights of poles (in m) | 8 | a | 24 | c | 80 |
|---|---|---|---|---|---|
| Length of the shadow (in m) | 5 | 10 | b | 35 | d |

**Q.16**

Case study:



A school is an educational institution designed to provide learning spaces and learning environments for the teaching students under the direction of teachers. Sheela goes to her school by cycle at an average speed of 12km/hr in 20 minutes and Syna goes to the same school by motor cycle by an average speed of 40km/hr and she reaches the school in 9 minutes.

i)If Sheela wants to reach her school in 15 minutes, what will be her speed?

ii)If Syna increased her speed by 20km/hr, then how much time she would have taken to reach the school?

iii)If Sheela goes at an average speed of 15km/hr, and she started at 6:30am from home, what time she will reach her school?

| Answers | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | $3.52 \times 10^8$ | 2 | 310 | 3 | 35 | 4 | 40 workers | 5 | ₹126 |
| 6 | 40 | 7 | 280 | 8 | 12 | 9 | 25 | 10 | 50cm |
| 11 | 200 more | 12 | i)385km<br><br>ii)20 litres | 13 | K=16×8 = 128 | 14 | 1008- 560 =448 | 15 | A=16, b=15,c=36,d=50 |
| 16. | i)16km/hr<br><br>ii)6 minutes<br><br>iii)After 16 minutes(6:46am) | | | | | | | | |