

# INVERSE PROPORTION

Answer all of these questions. Remember to show your working out in all questions.

## MAIN QUESTIONS

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| 1. If $y$ is inversely proportional to $x$ and $y = 10$ when $x = 2$ , find $y$ when $x = 5$   | 2. If $y$ is inversely proportional to $x$ and $y = 6$ when $x = 3$ , find $x$ when $y = 9$    |
| 3. If $y$ is inversely proportional to $x$ and $y = 12$ when $x = 4$ , find $y$ when $x = 6$   | 4. If $y$ is inversely proportional to $x$ and $y = 15$ when $x = 5$ , find $x$ when $y = 25$  |
| 5. If $y$ is inversely proportional to $x$ and $y = 20$ when $x = 10$ , find $y$ when $x = 25$ | 6. If $y$ is inversely proportional to $x$ and $y = 9$ when $x = 7$ , find $x$ when $y = 21$   |
| 7. If $y$ is inversely proportional to $x$ and $y = 14$ when $x = 2$ , find $y$ when $x = 7$   | 8. If $y$ is inversely proportional to $x$ and $y = 18$ when $x = 3$ , find $x$ when $y = 6$   |
| 9. If $y$ is inversely proportional to $x$ and $y = 24$ when $x = 4$ , find $y$ when $x = 8$   | 10. If $y$ is inversely proportional to $x$ and $y = 30$ when $x = 5$ , find $x$ when $y = 50$ |
| 11. If $y$ is inversely proportional to $x$ and $y = 16$ when $x = 8$ , find $y$ when $x = 32$ | 12. If $y$ is inversely proportional to $x$ and $y = 21$ when $x = 7$ , find $x$ when $y = 49$ |
| 13. If $y$ is inversely proportional to $x$ and $y = 28$ when $x = 4$ , find $y$ when $x = 14$ | 14. If $y$ is inversely proportional to $x$ and $y = 36$ when $x = 6$ , find $x$ when $y = 12$ |

15. If  $y$  is inversely proportional to  $x$  and  $y = 40$  when  $x = 10$ , find  $y$  when  $x = 25$

## MASTER QUESTIONS



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- M1. It takes 8 people 15 days to build a wall. How long would it take 12 people to build the same wall?
- M2. A factory can produce 1200 widgets in 6 days with 10 machines. How many days would it take to produce 1200 widgets with 15 machines?
- M3. A car travelling at 60 mph takes 4 hours to complete a journey. How long would it take if the speed increased to 80 mph?
- M4. A team of 5 workers can paint a house in 12 days. How many workers would be needed to paint the house in 6 days?
- M5. A water tank can be filled by 6 pipes in 8 hours. How long would it take to fill the tank if 12 pipes were used?