

INVERSE PROPORTION

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

MAIN QUESTIONS

1. y is inversely proportional to x . When $x = 2$, $y = 6$. Find y when $x = 3$
2. y is inversely proportional to x . When $x = 5$, $y = 10$. Find y when $x = 2$
3. y is inversely proportional to x . When $x = 4$, $y = 8$. Find x when $y = 16$
4. y is inversely proportional to x . When $x = 10$, $y = 5$. Find x when $y = 2$
5. y is inversely proportional to x^2 . When $x = 2$, $y = 3$. Find y when $x = 4$
6. y is inversely proportional to x^2 . When $x = 3$, $y = 2$. Find y when $x = 6$
7. y is inversely proportional to x^2 . When $x = 5$, $y = 10$. Find x when $y = 2.5$
8. y is inversely proportional to x^2 . When $x = 4$, $y = 5$. Find x when $y = 1.25$
9. y is inversely proportional to \sqrt{x} . When $x = 9$, $y = 4$. Find y when $x = 16$
10. y is inversely proportional to \sqrt{x} . When $x = 25$, $y = 10$. Find y when $x = 100$
11. y is inversely proportional to \sqrt{x} . When $x = 16$, $y = 5$. Find x when $y = 10$
12. y is inversely proportional to \sqrt{x} . When $x = 36$, $y = 6$. Find x when $y = 4$
13. y is inversely proportional to x^3 . When $x = 2$, $y = 1$. Find y when $x = 4$
14. y is inversely proportional to x^3 . When $x = 1$, $y = 5$. Find y when $x = 2$

15. y is inversely proportional to x^3 . When $x = 3$, $y = 2$. Find x when $y = 0.25$

16. y is inversely proportional to x^3 . When $x = 5$, $y = 0.8$. Find x when $y = 0.1$

MASTER QUESTIONS



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- M1. The time taken to complete a task is inversely proportional to the number of workers. If 4 workers take 9 hours to complete the task, how long would 6 workers take?
- M2. The intensity of light is inversely proportional to the square of the distance from the source. At 5 metres, the intensity is 100 units. What is the intensity at 10 metres?
- M3. The gravitational force between two objects is inversely proportional to the square of the distance between them. If the force is 36 newtons at 2 metres, what is the force at 6 metres?
- M4. The time taken to fill a tank is inversely proportional to the square of the radius of the pipe. If a pipe of radius 3 cm fills the tank in 8 hours, how long would a pipe of radius 6 cm take?