

112. Recognising Graphs That Represent Direct and Inverse Proportion

Practice Questions

1. Which type of proportion is represented by the equation $y = 4x$?
2. Which type of proportion is represented by the equation $y = \frac{10}{x}$?
3. A graph passes through the origin and is a straight line. Does it represent direct or inverse proportion?
4. A curve passes through points (1, 12), (2, 6), and (3, 4). Is this direct or inverse proportion?
5. A line equation is $y = 7x$. Does this represent direct proportion?
6. A company's fuel cost per journey is plotted against the number of passengers. The graph is a downward curve. Does this show direct or inverse proportion?
7. The equation $y = \frac{5}{x}$ is given. What type of proportion does it represent?
8. A straight-line graph through (0,0) has a gradient of 3. Does this show direct proportion?
9. A formula states that y varies directly as x . What form should the equation take?
10. A formula states that y varies inversely as x . What form should the equation take?

Scenario Questions

1. A car's fuel consumption graph shows miles per gallon vs speed. The graph forms a curved shape, decreasing as speed increases. Does this show direct or inverse proportion?
2. A worker's earnings are directly proportional to the number of hours worked. If the graph is plotted, what would its shape be?
3. The time taken to paint a house is plotted against the number of painters. The graph shows a downward curve. What does this tell us?
4. A gas follows Boyle's Law, where pressure and volume are inversely proportional. What would the graph look like?
5. The cost of fruit is directly proportional to the weight bought. What type of graph would this relationship create?
6. A machine's efficiency decreases as the workload increases. The graph curves downward. What type of proportion is this?
7. The time taken for a journey is plotted against speed, forming a downward curve. What does this show?
8. A phone bill is proportional to the number of minutes used. What type of proportion is this?
9. The brightness of a light bulb is plotted against the distance from the source, forming a downward curve. What does this indicate?
10. A supermarket plots the price of bread against weight. The graph is a straight line through the origin. What does this show?

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Practice Questions

1. Direct proportion
2. Inverse proportion
3. Direct proportion
4. Inverse proportion
5. Direct proportion
6. Inverse proportion
7. Inverse proportion
8. Direct proportion
9. $y = kx$
10. $y = \frac{k}{x}$

Scenario Questions

1. Inverse proportion
2. A straight line through the origin
3. Inverse proportion
4. A downward curve
5. A straight line through the origin
6. Inverse proportion
7. Inverse proportion
8. Direct proportion
9. Inverse proportion
10. Direct proportion