

## Partial Variation (1)

Name: \_\_\_\_\_ Class: \_\_\_\_\_ ( \_\_\_\_\_ ) Date: \_\_\_\_\_

Question	<p>1. Given that <math>y</math> partly varies directly as <math>x</math> and partly varies directly as <math>z</math>. When <math>x=2</math> and <math>z=4</math>, <math>y=14</math>; When <math>x=3</math> and <math>z=1</math>, <math>y=11</math>. Express <math>y</math> in terms of <math>x</math> and <math>z</math>.</p>	<p>2. Given that <math>y</math> partly varies as <math>x</math> and partly varies as <math>x^2</math>. When <math>x=1</math>, <math>y=4</math>; When <math>x=3</math>, <math>y=21</math>. Express <math>y</math> in terms of <math>x</math>.</p>	<p>3. Given that <math>y</math> is the sum of two parts. One part varies directly as <math>x</math> and the other part varies inversely as <math>z</math>. When <math>x=3</math> and <math>z=2</math>, <math>y=11</math>; When <math>x=1</math> and <math>z=4</math>, <math>y=4</math>. Express <math>y</math> in terms of <math>x</math> and <math>z</math>.</p>
1. Write down an equation connecting the variables (including the variation constants $k_1$ and $k_2$ )			
2. Substitute the values of the variables to find $k_1$ and $k_2$ (Can use calculator program)			
3. Write down an equation connecting the variables again (substituting the values of $k_1$ and $k_2$ )			

## Partial Variation (2)

Name: \_\_\_\_\_ Class: \_\_\_\_\_ ( \_\_\_\_\_ ) Date: \_\_\_\_\_

Question	4. Given that $y$ is partly constant and partly varies directly as $x^2$ . When $x=1$ , $y=7$ ; When $x=2$ , $y=13$ . Express $y$ in terms of $x$ .	5. Given that $y$ is partly constant and partly varies as $x^3$ . When $x=4$ , $y=21$ ; When $x=6$ , $y=59$ . Express $y$ in terms of $x$ .	6. Given that $y$ is the sum of two parts. One part is a constant, and the other part varies inversely as $x$ . When $x=1$ , $y=11$ ; When $x=4$ , $y=5$ . Express $y$ in terms of $x$ .
1. Write down an equation connecting the variables (including the variation constants $k_1$ and $k_2$ )			
2. Substitute the values of the variables to find $k_1$ and $k_2$ (Can use calculator program)			
3. Write down an equation connecting the variables again (substituting the values of $k_1$ and $k_2$ )			