Simultaneous Equations

9.3.1

**Unit 3**

**Simultaneous Equations**



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Station 1

Use graphical methods to find where the lines x + y = 6 and 2x – y = 6 meet.

For the line x + y = 6

y = ………………

x = 1, y = ……………..

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

x = 2, y = ……………..

x = 3, y = …………….

For the line 2x - y = 6

y = …………….

x = 1, y = ……………..

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

x = 2, y = ……………..

x = 3, y = …………….

**Use the ropes to plot the lines and find the point of intersection which is the solution of the simultaneous equations.**

Solution = ( ……. , ……… )

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Station 2

Use graphical methods to find the point of intersection of y = x + 3 and y = 1 – x.

For the line y = x + 3

x = 1, y = ……………..

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

x = 2, y = ……………..

x = 3, y = …………….

For the line y = 1 – x

x = 1, y = ……………..

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

x = 2, y = ……………..

x = 3, y = …………….

**Use the ropes to plot the lines and find the point of intersection which is the solution of the simultaneous equations.**

Solution = ( ……. , ……… )

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Station 3

Use graphical methods to find the point of intersection of x + y = 6 and y = 2x .

For the line x + y = 6

y = ……………………….

x = 1, y = ……………..

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

x = 2, y = ……………..

x = 3, y = …………….

For the line y = 2x

x = 1, y = ……………..

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

x = 2, y = ……………..

x = 3, y = …………….

**Use the ropes to plot the lines and find the point of intersection which is the solution of the simultaneous equations.**

Solution = ( ……. , ……… )

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Station 4

Use graphical methods to find the point of intersection of y = 2x - 3 and 2x - y = 2 .

For the line y = 2x – 3

x = 1, y = ……………..

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

x = 2, y = ……………..

x = 3, y = …………….

For the line 2x - y = 2

y = ……………………….

x = 1, y = ……………..

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

x = 2, y = ……………..

x = 3, y = …………….

**Use the ropes to plot the lines and find the point of intersection which is the solution of the simultaneous equations.**

Solution = ( ……. , ……… )

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Station 5

Use graphical methods to find the point of intersection of 3x + y = 2 and 6x + 2y = 4.

For the line 3x + y = 2

y = ………………………..

x = 1, y = ……………..

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

x = 2, y = ……………..

x = 3, y = …………….

For the line 6x + 2y = 4

y = …………………………..

x = 1, y = ……………..

|  |  |  |  |
| --- | --- | --- | --- |
| x |  |  |  |
| y |  |  |  |

x = 2, y = ……………..

x = 3, y = …………….

**Use the ropes to plot the lines and find the point of intersection which is the solution of the simultaneous equations.**

Solution = ( ……. , ……… )