



Air maths tuition

Interact, engage and perform

## Mod Equations : How to solve $|x-2|=3$

<p>Solve <math> x-2 =3</math></p> <p><math>\therefore x-2=3</math> or <math>-(x-2)=3</math></p> <p><math>\therefore x=5</math> or <math>x=-1</math></p> <hr/> <p><math>(x-2)^2=3^2</math></p> <p><math>\therefore x^2-4x+4=9</math></p> <p><math>\therefore x^2-4x-5=0</math></p> <p><math>\therefore (x-5)(x+1)=0</math></p> <p><math>\therefore x-5=0</math> or <math>x+1=0</math></p> <p><math>\therefore x=5</math> or <math>x=-1</math></p>	<p>At (A) <math>-(x-2)=3</math></p> <p><math>\therefore -x+2=3</math></p> <p><math>\therefore x=-1</math></p> <p>At (B) <math>x-2=3</math></p> <p><math>\therefore x=5</math></p> <p><math>\therefore x=-1, 5</math></p>
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