

Solve the linear system by **SUBSTITUTION**:

<p>Neither equation is in the form "y =" or "x ="</p>	<p>Given:</p> $x + 4y = 6 \quad (1)$ $2x - 3y = 1 \quad (2)$		
<p><b>STEP 1:</b> Isolate the variable (x or y) in ONE of the equations.</p>	<p>Isolate x in (1)  <math>x = 6 - 4y \quad (3)</math></p>		
<p><b>STEP 2:</b> Substitute this equation into the other equation...</p>	<p>sub (3) into (2)  <math>2(6 - 4y) - 3y = 1</math></p>		
<p><b>STEP 3:</b> Solve the resulting equation.</p>	$12 - 8y - 3y = 1$ $12 - 11y = 1$ $12 - 1 = 11y$ $\frac{11}{11} = \frac{11y}{11}$ $\boxed{1 = y}$		
<p><b>STEP 4:</b> Substitute the value found for the one variable into either equation to find the other variable.</p>	<p>Sub <math>y = 1</math> into (3)  <math>x = 6 - 4(1)</math>  <math>x = 6 - 4</math>  <math>\boxed{x = 2}</math></p>		
<p><b>STEP 5:</b> State the point of intersection</p>	<p>POI is <math>(2, 1)</math></p>		
<p>Check your solution in both original equations</p>			
<p><math>x + 4y = 6</math> Check in (A)</p> <p>LS  <math>x + 4y</math>  <math>= (2) + 4(1)</math>  <math>= 2 + 4</math>  <math>= 6</math></p>	<p>RS  <math>= 6</math></p>	<p><math>2x - 3y = 1</math> Check in (B)</p> <p>LS  <math>2x - 3y</math>  <math>= 2(2) - 3(1)</math>  <math>= 4 - 3</math>  <math>= 1</math></p>	<p>RS  <math>= 1</math></p>