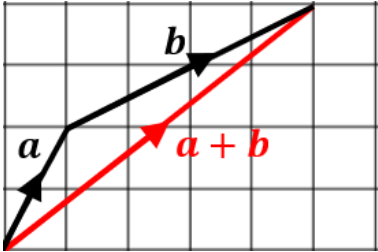
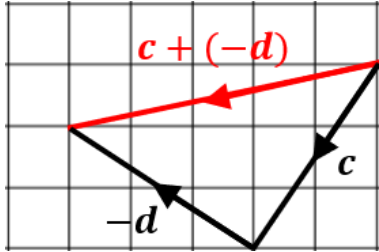
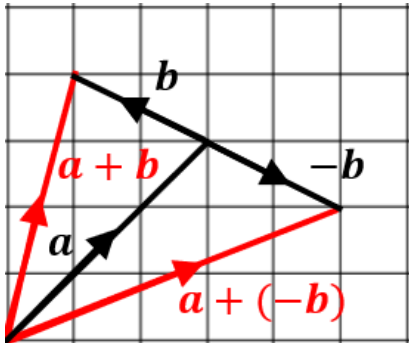
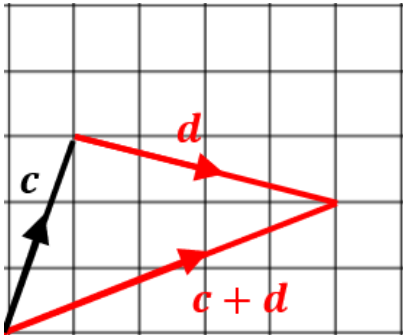
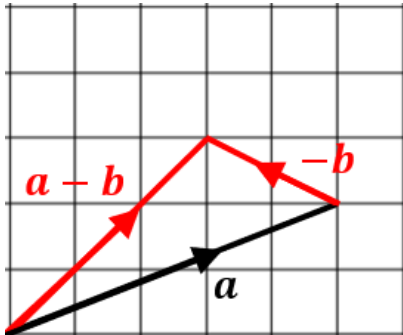


## Adding and Subtracting Vectors

<b>Adding and Subtracting Vectors</b>			
<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	
<p>The vectors <math>a</math> and <math>b</math> are shown. Draw the vector <math>a + b</math>.</p> 	<p>The vectors <math>c</math> and <math>-d</math> are shown. Draw the vector <math>c + (-d)</math>.</p> 		<p>The vectors <math>a, b</math> and <math>-b</math> are shown. Draw the vectors</p> <p>(i) <math>a + b</math></p> <p>(ii) <math>a + (-b)</math>.</p>
<b>(d)</b>	<b>(e)</b>	<b>(f)</b>	
	<p><math>c = \begin{pmatrix} 1 \\ 3 \end{pmatrix}</math> <math>d = \begin{pmatrix} 4 \\ -1 \end{pmatrix}</math></p> <p>Draw the vector <math>c + d</math> and find its column vector.</p> <p style="color: red; text-align: center;"><math>\begin{pmatrix} 5 \\ 2 \end{pmatrix}</math></p>		<p><math>a = \begin{pmatrix} 5 \\ 2 \end{pmatrix}</math> <math>b = \begin{pmatrix} 2 \\ 1 \end{pmatrix}</math></p> <p>Draw the vector <math>a - b</math> and find its column vector.</p> <p style="color: red; text-align: center;"><math>\begin{pmatrix} 3 \\ 3 \end{pmatrix}</math></p>
			<p><math>e = \begin{pmatrix} 7 \\ 1 \end{pmatrix}</math> <math>f = \begin{pmatrix} -3 \\ 4 \end{pmatrix}</math></p> <p>Find <math>e + f</math></p> <p style="color: red; text-align: center;"><math>\begin{pmatrix} 4 \\ 5 \end{pmatrix}</math></p>
<b>(g)</b>	<b>(h)</b>	<b>(i)</b>	<b>(j)</b>
<p><math>c = \begin{pmatrix} -2 \\ 5 \end{pmatrix}</math> <math>d = \begin{pmatrix} 1 \\ 4 \end{pmatrix}</math></p> <p>Find <math>c - d</math></p> <p style="color: red; text-align: center;"><math>\begin{pmatrix} -3 \\ 1 \end{pmatrix}</math></p>	<p><math>a = \begin{pmatrix} 0 \\ 4 \end{pmatrix}</math> <math>b = \begin{pmatrix} 6 \\ -3 \end{pmatrix}</math></p> <p>Find <math>b - a</math></p> <p style="color: red; text-align: center;"><math>\begin{pmatrix} 6 \\ -7 \end{pmatrix}</math></p>	<p><math>e = \begin{pmatrix} -6 \\ 1 \end{pmatrix}</math> <math>f = \begin{pmatrix} 2 \\ -1 \end{pmatrix}</math></p> <p>Find <math>-e + f</math></p> <p style="color: red; text-align: center;"><math>\begin{pmatrix} 8 \\ -2 \end{pmatrix}</math></p>	<p><math>a = \begin{pmatrix} 8 \\ 0 \end{pmatrix}</math> <math>b = \begin{pmatrix} -2 \\ -5 \end{pmatrix}</math> <math>c = \begin{pmatrix} -3 \\ 7 \end{pmatrix}</math></p> <p>Find (i) <math>a + b + c</math> (ii) <math>a + b - c</math> (iii) <math>a - b - c</math></p> <p style="color: red; text-align: center;"> <math>\begin{pmatrix} 3 \\ 2 \end{pmatrix}</math>      <math>\begin{pmatrix} 9 \\ -12 \end{pmatrix}</math>      <math>\begin{pmatrix} 13 \\ -2 \end{pmatrix}</math> </p>