


15th June	
<p>Solve $3x^2 - 23x - 67 = 0$</p> <p>Give your answers to 1 decimal place.</p>	 Corbettmaths $x = \frac{23 \pm \sqrt{1333}}{6}$ $x = 9.9, -2.3 \text{ (1 d.p.)}$
<p>Make w the subject of</p> $\sqrt{\frac{4aw}{a+w}} = 8$	$\frac{4aw}{a+w} = 64$ $aw = 16a + 16w$ $aw - 16w = 16a$ $w(a-16) = 16a$ $w = \frac{16a}{a-16}$
<p>The line L has equation</p> $5x - 4y + 30 = 0$ <p>The line L intersects the x-axis at the point A. The line L intersects the y-axis at the point B.</p> <p>Find the distance between the points A and B.</p>	<p>At A $5x + 30 = 0$ $x = -6$ $(-6, 0)$</p> <p>At B $-4y + 30 = 0$ $y = \frac{15}{2}$ $(0, \frac{15}{2})$</p> $AB = \sqrt{6^2 + (\frac{15}{2})^2} = \frac{3}{2}\sqrt{41}$ (9.60)
<p>Work out the matrix that transforms the unit square by a reflection in line $y = x$</p>	$(1, 0) \rightarrow (0, 1)$ $(0, 1) \rightarrow (1, 0)$ $\begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$