Trigo Exercise

We have to learn identities:

$\cos^2\alpha + \sin^2\alpha = 1$

$\cos^2\alpha - \sin^2\alpha = \cos 2\alpha$

Example:

$\cos^2 30^0 - \sin^2 30^0 =$

$= (\frac{\sqrt{3}}{2})^2 - (\frac{1}{2})^2 = \frac{3}{4} - \frac{1}{4} = \frac{1}{2}$

$\cos^2 30^0 - \sin^2 30^0 = \cos 60^0 = \frac{1}{2}$

$\cos^2 45^0 - \sin^2 45^0 = \cos 90^0$

$\cos^2 90^0 - \sin^2 90^0 =$

$\cos^2 60^0 - \sin^2 60^0 =$

$\cos^2 \frac{\alpha}{2} - \sin^2 \frac{\alpha}{2} =$

$\cos^2 \frac{45}{2} - \sin^2 \frac{45}{2} =$

$\sin^2 x - 4\sin x + 3 = 0$

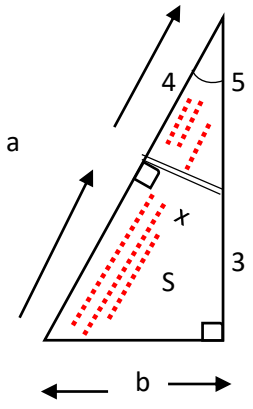
$a^2 - 4a + 3 = 0$

$(a - 3)(a - 1) = 0$

$\sin x = 1$

$X = 90^0 + 360k$

<u>sinX = a</u>



Calculate S =? (the area)

$\cos\alpha = \frac{4}{5} = \frac{8}{a} \Rightarrow a = 10$

$b^2 = 10^2 - 8^2 = 36$

$b = 6$

$x^2 = 5^2 - 4^2 \Rightarrow x = 3$

$S = \frac{6.8}{2} - \frac{4.3}{2} = 24 - 6 = 18$