
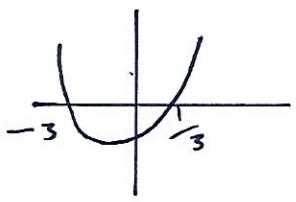
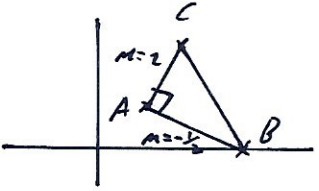


13th May	
Write $\frac{17\sqrt{3} + 5\sqrt{5}}{2\sqrt{3} + \sqrt{5}} \times (2\sqrt{3} - \sqrt{5})$ $\times (2\sqrt{3} - \sqrt{5})$ in the form $a + b\sqrt{15}$	 Corbettmaths $\frac{102 - 17\sqrt{15} + 10\sqrt{15} - 25}{12 - 5}$ $= \frac{77 - 7\sqrt{15}}{7} = 11 - \sqrt{15}$
Angle θ is obtuse and $\cos\theta = -\frac{5}{13}$ <i>sin positive.</i> Work out the value of $\sin\theta$ $\cos^2\theta + \sin^2\theta = 1$ $\frac{25}{169} + \sin^2\theta = 1$	$\sin^2\theta = \frac{144}{169}$ $\sin\theta = \frac{12}{13}$
Solve the inequality $(3x-1)(x+3)$ $3x^2 + 8x - 3 \leq 0$ 	$-3 \leq x \leq \frac{1}{3}$
Given A(2, 4) B(10, 0) and C(3, 6) Find the area of triangle ABC. 	gradient of AC = 2 gradient of AB = $-\frac{1}{2}$ \therefore perpendicular $AC = \sqrt{1^2 + 2^2} = \sqrt{5}$ $AB = \sqrt{8^2 + 4^2} = \sqrt{80}$ $\frac{1}{2} \times \sqrt{5} \times \sqrt{80} = \boxed{10}$
$(2x - 1)$ is a factor of $2x^3 + 9x^2 - 53x + a$ Work out the value of a $f(x) = 2x^3 + 9x^2 - 53x + a$ $f\left(\frac{1}{2}\right) = 0$	$2\left(\frac{1}{2}\right)^3 + 9\left(\frac{1}{2}\right)^2 - 53\left(\frac{1}{2}\right) + a = 0$ $-24 + a = 0$ $a = 24$