

Tutorial 5

1. Solve $2(3x + 2) < 4(2x + 3)$
2. Solve $2x - 5 > \frac{11 - 2x}{5}$ or $x + 2 > \frac{x + 2}{4}$
3. Solve $6x^2 + 5x + 1 > 0$
4. Solve $4x^2 - 4x + 3 < 0$
5. Solve $(x + 1)^2 \geq 3x - 5$
6. Solve $x(x - 2) \geq 4(x - 2)$

Simple applied problems involving inequalities.

7	Find the value for k if the equation $x^2 - kx + 9 = 0$ has two distinct real roots	Explanation
8	Find the value for k if the equation $x^2 - kx - 9 = 0$ has no real roots	Explanation
9	The product of two consecutive positive integers is less than or equal to 6. Find the possible values of the integers.	Explanation

Numerical Solutions

1. $x > -4$
2. $x > -2$
3. $x < -\frac{1}{2}$ or $x > -\frac{1}{3}$
4. no solutions
5. all real numbers
6. $x < 2$ or $x > 4$
7. $k < -6$ or $k > 6$
8. no solutions for k
9. The possible solutions are (1,2) and (2,3)