

The quadratic formula is used to find the roots of a quadratic equation, especially when a quadratic doesn't factorise.

The formula is $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$. The negative b plus or subtract the square root of b squared subtract four times a times c all divided by two a.

Solve $2x^2 + 5x - 4 = 0$, rounding the answers to one decimal place.

Step 1 - Calculate the value of the discriminant $b^2 - 4ac$ using $a = 2$, $b = 5$ and $c = -4$.

So, the answer would be $5^2 - 4(2)(-4) = 25 + 32 = 57$.

Step two - substitute the discriminant and values of a, b and c into the quadratic formula.

Step three calculate both roots using $\frac{-5 \pm \sqrt{57}}{4}$.

The roots are then $\frac{-5 - \sqrt{57}}{4} \approx -3.137$, which rounds to -3.1 , and $\frac{-5 + \sqrt{57}}{4} \approx 0.637$, which rounds to 0.6 .

Remember, use the quadratic formula for solving equations and round to the number of decimal places or significant figures you are asked for.