

How do you factor $2x^2-3x-2$? | Socratic

$$2x^2 - 3x - 2 = (2x + 1)(x - 2)$$

If a polynomial with integer coefficients has a rational root of the form $\frac{p}{q}$ in lowest terms then p must be a divisor of the constant term and q a divisor of the coefficient of the highest order term.

In your case any possible rational roots of $2x^2 - 3x - 2 = 0$ must be ± 2 , ± 1 or $\pm \frac{1}{2}$. By trying these values you will find that $x = 2$ and $x = -\frac{1}{2}$ are zeros, so $(2x + 1)$ and $(x - 2)$ are factors.